

**A Case Study of the Drivers and Barriers of Implementation of the Baby
Friendly Hospital Initiative (BFHI) within a Rural Sub-District in South
Africa**

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Declaration

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Abstract

Exclusive breastfeeding is recognised as a key child survival strategy in the South African context and the Baby Friendly Hospital Initiative (BFHI) accreditation for maternity facilities is recommended by the National Department of Health (NDOH) as crucial to improving the standards of care required for optimal support for mothers to successfully breastfeed. The Cape Winelands District in the Western Cape is a region that needs to improve the accreditation rate for its facilities. Key informant interviews were conducted within rural maternity services in the Breede Valley Sub-District. Interviews identified the barriers and enablers related to the health system building block ‘information’. An additional goal was to examine communication and how information was disseminated throughout all levels of the health system to achieve the aim of successful policy implementation of the BFHI. Findings demonstrated that personal experiences of healthcare personnel may impact on the information offered to mothers. In addition, the operational manager of a facility possessed significant influence to ensure a policy was implemented and adhered to. Recommendations include advocating for education promoting breastfeeding in all healthcare programmes especially during the antenatal period by providing consistent, non-conflicting messages. Management should provide vision and strong leadership around implementation of the BFHI policy and ensure effective communication strategies around significant changes in the policy. Implementing BFHI is a complex context specific activity and to ensure optimal implementation of “Step three” (inform pregnant women of the benefits and management of breastfeeding) it is necessary to examine this particular area by using the recommendations as a framework in order to probe further.

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I would like to acknowledge my employer, 'South to South', University of Stellenbosch for supporting me through the research process by affording me study-time and resources.

Dedications

To my husband Glen, without his enduring support and encouragement this piece of work would not have come to fruition. To my children, Hermione and Campbell

-who were both breastfed- for giving me the gift of understanding and unconditional love and for their patience when their mother was not available.

Lastly, to all the mothers of South Africa, who have a right to high quality support to ensure they are enabled and empowered to provide the best start in life for their children, no matter what their social circumstances.

Acronyms and Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
BANC	Basic Antenatal Care
BFHI	Baby Friendly Hospital Initiative
BMS	Breast Milk Substitute
BVSD	Breede Valley Sub-District
CWD	Cape Winelands District
HCP	Healthcare Personnel
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
IMCI	Integrated Management of Childhood Diseases
MBFI	Mother Baby Friendly Initiative
MDG	Millennium Development Goal
MOU	Midwife Obstetric Unit
MTCT	Mother-to-Child Transmission of HIV and AIDS
NDOH	National Department of Health
PHC	Primary Healthcare Facility
PMTCT	Prevention of Mother-to-Child Transmission of HIV and AIDS
UNICEF	United Nations Children's Emergency Fund
WHO	World Health Organisation

PART A. RESEARCH PROTOCOL

A Case Study of the Drivers and Barriers of Implementation of the Baby Friendly Hospital Initiative (BFHI) in a Rural Sub-District in South Africa

Introduction

In 2011, the National Department of Health (NDOH) published the Tshwane Declaration which confirmed South Africa's commitment to declaring itself as a country that actively promotes, protects and supports breastfeeding. The National Breastfeeding Consultative team voiced and documented their concern surrounding South Africa's "unacceptably high" infant and child mortality rates (Motsoaeldi, 2011); that exclusive breastfeeding¹ rates remain extremely low and the progress towards Millennium Development Goal (MDG) 4² was not on target. In addition, the NDOH recognised that breastfeeding practices in South Africa were being undermined by the aggressive marketing of formula milk by the Breast Milk Substitute (BMS) industry. Previous recommendations stipulated that HIV positive women should formula feed their infants as part of prevention of mother-to-child transmission (PMTCT) of HIV and AIDS interventions (NDOH, 2011).

One of the recommendations within the declaration was that all public facilities should become accredited with Baby Friendly status³ by 2015. The Baby Friendly Hospital Initiative (BFHI) was launched globally by the WHO and UNICEF in 1991 in an effort to create an environment that would provide advice, practical assistance and support to women so that

¹ Exclusive breastfeeding is defined as no other food or drink, not even water, except breastmilk (including milk expressed or from a wet nurse) for six months of life, but allows the infant to receive ORS, drops and syrups (vitamins, minerals and medicines) (WHO, 2001)

² Millennium Development Goal 4 – reduce child mortality by two thirds by 2015

³ Baby Friendly status means being accredited by passing an assessment conducted by BFHI accreditation committee of fulfilment of the Ten steps and three items to successful breastfeeding

they are enabled to successfully breastfeed (UNICEF/WHO, 1991). The South African NDOH changed the title from ‘Baby Friendly Hospital Initiative’ to the ‘Mother Baby Friendly Initiative’ (MBFI) in an effort to recognise the inclusion of the mother, and to broaden the interpretation beyond the hospital setting (Figure 1), however the content remains the same.⁴ For the purpose of this research and to ensure consistency, the author will refer to the policy as the Baby Friendly Hospital Initiative (BFHI) throughout this paper.

The BFHI was launched in 1991 by the WHO and UNICEF to provide a ten step framework enabling facilities to promote an organisational culture that promotes, protects and supports breastfeeding. South Africa’s BFHI contains ‘Ten Steps to Successful Breastfeeding’ plus three additional items. It provides a framework for a standard of care that both facilities and the community should work towards to achieving international accreditation for their efforts. This accreditation identifies a facility as providing a high standard of care to ensure women and their infants are supported to successfully initiate and continue breastfeeding.

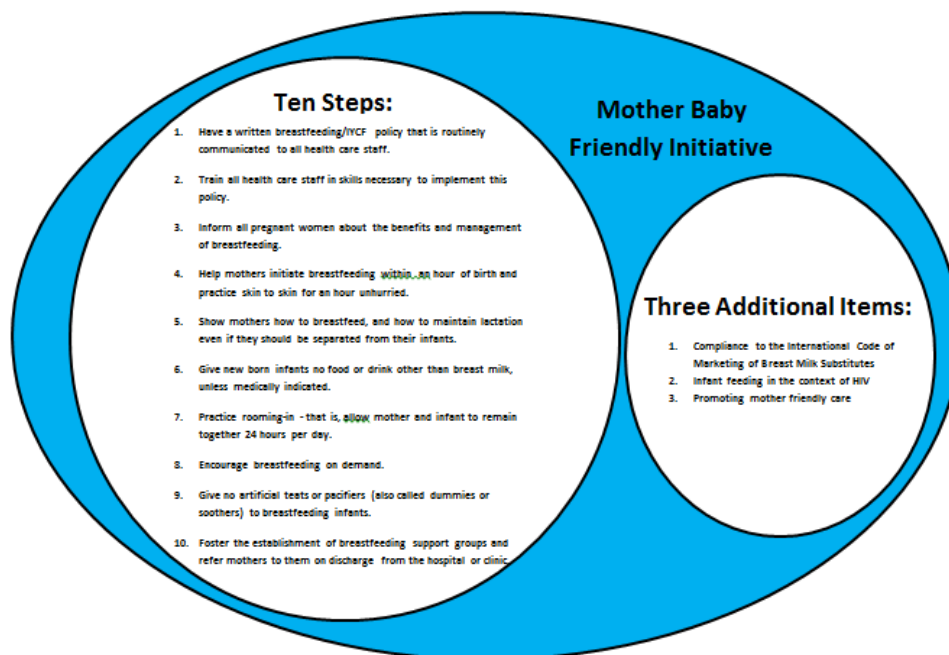


Figure 1. Mother Baby Friendly Initiative (BFHI, WHO/UNICEF, 2009)

⁴ Here on in will be referred to as BFHI throughout the document

There is evidence that a facility with BFHI accreditation has higher rates of successful initiation of breastfeeding and that women are more likely to continue breastfeeding for longer, that the initiative has measurable and proven impact, increasing the likelihood of babies being exclusively breastfed for the first six months (Kramer et al, 2001; Merten et al, 2005; WHO, 2013).

The role of breastfeeding as a key child survival strategy is well documented (Jones et al, 2003; Edmond et al, 2006; Black et al, 2013). South Africa has high infant mortality and morbidity rates due to malnutrition and other illnesses; many of which can be averted through optimal breastfeeding and complementary feeding. It is perhaps not surprising that there have been renewed efforts to reinvigorate the promotion of breastfeeding in the South African context (Western Cape Department of Health, 2011).

Background

In 1989 the United Nations Assembly ratified the ‘Convention on the Rights of the Child’ which South Africa adopted as part of the new democratic constitution. It states that “...it is recognised that it is the right of the child to enjoy the highest attainable standard of health and...that state parties shall pursue full implementation of this right and take measures to diminish infant and child mortality” (South African Constitution, 1994).

Despite signing on to the Millennium Development Goals in 2000 and committing to work towards MDG 4 (reduce the child mortality rate by two-thirds, between 1990 and 2015), South Africa experienced an increase in infant and child mortality rates. The infant mortality rate (IMR) in 1990 stood at 47 infant deaths per 1000 live births (47:1000) and by 2000 had increased to 52:1000 (World Bank, 2014). The new millennium brought about the introduction

of PMTCT interventions and the implementation of the rotavirus vaccination, and as a result the IMR had fallen to 35:1000 by 2010 (World Bank, 2014). Although declining, the IMR has been described by the Minister of Health as still “unacceptably high” (Motsoaledi, 2011) in comparison to other similar countries such as Egypt (18:1000) and Brazil (14:1000). South Africa is one of a cohort of 12 countries who are not on target of for MDG 4 (Bhutta et al, 2010).

The ‘State of the World’s Children Report 2005-2009’ (UNICEF, 2010) identified the predominant causes of child death in South Africa as: acute respiratory infections, sepsis, diarrhoeal disease and tuberculosis. Almost two thirds of those children who died were malnourished, with over one third suffering severe malnutrition (Bhutta et al 2010).

Breastfeeding has been recognised as a key child survival strategy in resource-poor countries (Black et al, 2013, Bhutta et al, 2008), and exclusive breastfeeding has been associated with a reduced incidence of diarrhoea and respiratory infection and allergies (UNICEF, 2003; Jones et al, 2003). It is estimated that with 90% coverage of exclusive breastfeeding, more than 220 000 child deaths could be averted globally (Bhutta et al, 2010). In addition, suboptimal breastfeeding practices such as mixed feeding and fetal growth restriction are thought to cause more than 1.3 million deaths, or 19% of all deaths in children younger than 5 years (Black et al, 2013). A pooled analysis by the WHO (2000) indicated that breastfeeding could prevent over three quarters of deaths in early infancy, and 37% of deaths during the second year of life.

South Africa has the largest burden of HIV and AIDS in the world with a quarter of all people living with HIV in sub-Saharan Africa (UNAIDS, 2013), however, the risk of an infant dying from HIV has reduced dramatically in the last decade due to effective PMTCT interventions

in the antenatal, perinatal and postnatal periods. However, the provision of free infant formula as a PMTCT intervention and the aggressive marketing by the Breast Milk Substitute (BMS) industry has been documented as contributing to the rise in infant deaths from other causes (Palmer, 2009). Coovadia and Rollins (2007) also cited these factors that have undermined breastfeeding practices in South Africa. In 1992 the WHO/UNICEF consultation on HIV and breastfeeding issued a statement which argued that the risk of death from other causes such as diarrhoeal disease and pneumonia was higher than that from HIV transmission if an infant was not breastfed and advocated that exclusive breastfeeding should be the usual advice.

The provision of free formula milk as a PMTCT intervention has been successful in reducing the mother-to-child transmission (MTCT) rate of HIV/AIDS but has had other far reaching negative consequences in resource poor settings. In 2002, Coutoudis et al documented the possible consequences of the provision of free formula as a PMTCT intervention. One such observation was the ‘spill over effect’ of formula use to the general population, as evident in four Sub Saharan countries (Latham and Kinsanga, 2001) and a subsequent risk of increase in infant mortality rates documented in South Africa during this period (Coovadia et al, 2007). In a Zambian study investigating the effect of early and abrupt cessation of breastfeeding on the HIV free survival rate of infants, there was no improvement in those infants who stopped breastfeeding at 4 months (Kuhn et al, 2008). In a further study in 2009, Arpadi et al concluded that HIV uninfected infants who stopped breastfeeding were more likely to suffer from growth faltering which could be partially mitigated by continuing breastfeeding up until 15 months of age.

Supporting exclusive breastfeeding is echoed in the most recent WHO infant feeding and HIV guidelines (2010) where one of the key principles highlights that “health authorities must make the decision to either exclusively breastfeed and provide anti-retroviral drugs (ARV’s)

or avoid all breastfeeding, the decision should be based on the socio economic status of the country, the epidemiology, especially HIV and the main causes of infant and child mortality”. In response to the rising infant mortality rate and low breastfeeding rates in South Africa the NDOH published the Tshwane Declaration in 2011 which resolved that South Africa would declare itself to promote, protect and support breastfeeding as a key child survival strategy (NDOH, 2011). The declaration pledged that all provinces in the country would phase out the provision of free formula milk from public clinics in by 2012.⁵ In addition, the declaration committed to improve breastfeeding services by supporting a renewed focus on public facilities and to work towards and sustain Baby Friendly Hospital Initiative (BFHI) accreditation by 2015.

Many of the recommendations of the Tshwane Declaration have featured in the recent key South African public health documents listed below:

- South Africa’s National Strategic Plan for Maternal, New-born, Child and Women’s Health (MNCWH) and Nutrition, 2012 – 2016.
- South Africa’s National Strategic Plan on HIV, STI’s and TB 2012-2016.
- South African Infant and Young Child Feeding Policy, 2013.
- Roadmap for Nutrition in South Africa 2013-2017.

All of the above policies recommend that all new mothers exclusively breastfeed for the first six months of life, introduce complementary feeding at six months of age, and continue breastfeeding for up to two years of age. HIV positive women are recommended to gradually stop breastfeeding at 12 months of age provided there is a nutritionally beneficial safe

⁵ At time of writing formula milk is provided free in public clinics as part of PMTCT interventions in the Western Cape only.

replacement available/readily accessible within their social context. The current recommended feeding guidelines are detailed in Appendix 7.

In a study conducted in the Western Cape, Doherty et al (2012) discuss the reasons why women may stop breastfeeding early and conclude, in an effort to support women in South Africa to continue to breastfeed there is an urgent need for action this ‘action’ is suggested as interventions at all levels of the health system and would ideally incorporate the following; introduction of a national health promotion plan by the media directed towards all communities; a renewed focus on accurate evidence-based training for all levels of health care personnel and an acceleration of efforts to increase the number of BFHI accredited health facilities in South Africa. To facilitate the above there is also a need for local leadership to review the current policy of provision of free formula as a PMTCT intervention and to strengthen the enforcement of the International Code of Marketing of Breastmilk Substitutes (hereafter, ‘The Code’).

Within the WHO (2011) status report of implementation of ‘The Code’ South Africa has provided minimal information on their status but it is reported that compliance to the code is voluntary. As part of the Tshwane declaration the NDOH confirmed that the code will be legalised within the Foodstuffs, Cosmetics and, Disinfectants Act, 1972, which became law in 2013.

A study in the United States concluded that Baby Friendly designated hospitals have elevated rates of breastfeeding initiation and exclusivity, these elevated rates were observed regardless of demographic factors that are traditionally linked with low breastfeeding rates (Merewood et al, 2005). The Millennium cohort study in the United Kingdom suggests there is increasing evidence that implementation of BFHI may increase initiation of breastfeeding and increase

duration of any breastfeeding and exclusive breastfeeding, albeit these results are subject to secular trends (Bartington et al, 2006). Black et al (2013) highlights in the Lancet Series on Nutrition that there has been evidence of an improvement in exclusive breastfeeding rates in facilities and communities that develop and effect strategies to promote breastfeeding.

Nickel et al (2013) in an exploration into the “Implementation of the ten steps in US hospitals serving low wealth patients” describe perceived barriers to BFHI implementation as negative perceptions towards certain recommended practices such as: rooming in, older staff reluctant to change, a perception that physicians will oppose policy change, in addition the lack of available data related to existing practices was seen as hindering the process to enable implementation strategies. Suggested enablers included multi-level advocacy for breastfeeding strategies within the facilities and strong management. Educating staff on the benefits of breastfeeding and inclusion of breastfeeding in personnel evaluations were thought to have assisted in implementation of the policy.

There is less written about the perceptions and attitudes of HCPs towards the implementation of BFHI. It is, however, possible that extensive policy changes are difficult to implement and there may be resistance these changes (Latimer, 2000). Most of the concerns raised above in relation to the promotion of exclusive breastfeeding are therefore ‘health systems’ concerns, relating to the routine functioning of the hardware and software elements within these systems. Health system strengthening to support policy implementation is at the heart of policy success, and can be illustrated by the WHO as the six building blocks of the Health System as seen in Figure 2 (WHO, 2007).

The overall relevance of health systems research provides an insight into the reasons why policies are not being implemented, (or are implemented poorly), and that lessons can be

learned from the process to further inform future interventions which would influence more effective results (Gray et al 2013). In addition, to understand why implementation of policies fail and the role of the actors in the process has been prioritised in the broader field of health systems research (Orgill et al, 2013).

The goal of an effective health system is to provide effective, good quality and equitable health care and to ensure coverage and accessibility to as many of the population it serves as possible (WHO, 2010). It is the building block ‘information’ that this research will seek to probe with regard to how the cultures (or software) within an organisation can impact on how information is interpreted and disseminated to support or impede the implementation of BFHI. Information within the health system can range from the information disseminated down from a national level within strategic plans, health data that informs managers of their health outcomes, right down to the information exchanges between health care personnel and service user. ‘Information’ has a direct influence on all the other components of the health system; and can impact the knowledge, attitudes, and practices of the health workforce implementing the policy on the ground, the interpretation of the information and how it is applied.

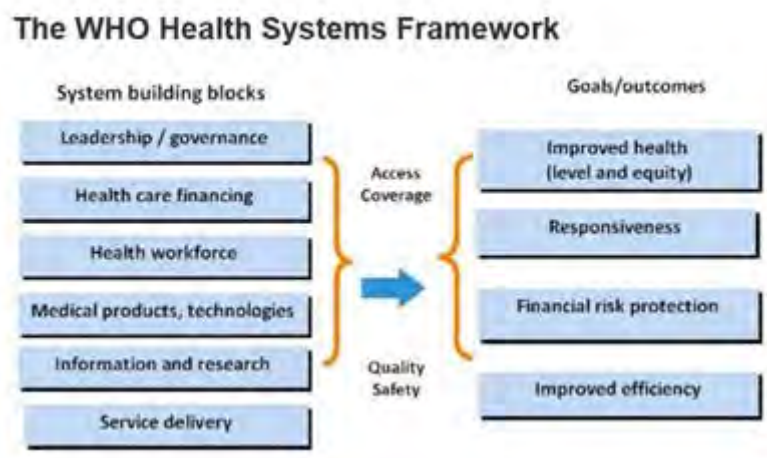


Figure 2. WHO Health systems ‘building blocks’ framework (WHO, 2007)

Purpose Statement

The Cape Winelands District (CWD) in the Western Cape is a region in South Africa with a disproportion of wealth. It is an area abundant with wine farms and tourism, but also an area that suffers from many public health challenges. The unemployment rate is sixteen percent and almost twenty-two percent of the population live in poverty, social problems associated with poverty and alcohol use are common (Western Cape Provincial Treasury, 2012).

The incidence of diarrhoeal disease in infants in the Western Cape is higher than the national average (Bamford et al 2013) and places a heavy burden on local health services. Exclusive breastfeeding for up to six months is widely promoted as the most effective way to prevent diarrhoea and other childhood illnesses (Bhutta et al, 2010). Recent research on breastfeeding practices in the Breede Valley Sub District (BVSD), suggests that the rate of exclusive breastfeeding is 6% (Goosen, unpublished) which is lower than the previously reported inadequate national figure of 8% (SADHS, 2003). In order to improve health outcomes there is therefore a need to ensure health facilities can adequately support women to exclusively breastfeed and to continue breastfeeding for as long as possible.

In the Western Cape only 18 out of 51 facilities have achieved BFHI accreditation (Western Cape Department of Health, 2011; National Department of Health, 2008), and at present there is only one out six facilities in the CWD that has attained accreditation. Another facility recently lost accreditation and the Breede Valley Sub District (BVSD) are still to achieve

BFHI accreditation.⁶ BVSD, including Worcester Hospital, recently underwent an appraisal for BFHI (Western Cape Department of Health, 2013) and although the facilities passed many of the steps, BFHI Step three ('Inform women of the benefits and management of breastfeeding') was an area of particular concern. The appraisal was a valuable tool in that it provided insight into areas of required improvement and could potentially inform the strategies to strengthen information that women received in the antenatal period. BFHI Step three is also highlighted by the Western Cape 'Restoration of breastfeeding task team' (2011) as an area that requires attention throughout the Province therefore implementation of BFHI Step three will be the focus of this research study.

⁶ At time of writing (this is changeable)

Research Question

What are the health system factors that drive or impede the implementation of interventions to inform all pregnant women about the benefits and management of breastfeeding (BFHI Step three – To inform all pregnant women of the benefits and management of breastfeeding) within a rural setting in the Western Cape?

Aim of the research

To advance the understanding of the policy implementation process and to identify the role of information within the different levels of the health system to support or impede the implementation of BFHI Step three. To explore the influences on the potential success of the policy and how they may shape the journey.

The individual objectives to achieve the overall research aim:

1. Identify the forces driving the implementation of BFHI Step three and the barriers to its success in relation to the health system building block ‘information’.
2. Explore stakeholder’s views, attitudes and practices and this affects the information women receive to support the implementation of BFHI Step Three.
3. Examine the effect of the above on policy implementation.
4. Formulate recommendations on the successful process of implementation of BFHI and specifically Step three.

Methodology

Using case study research is a useful approach to health systems research where often rather than testing the effect of an intervention, the focus is how the intervention is implemented and

what enables or impedes its success. Yin (2009) describes a case study as: "...an empirical inquiry that investigates a contemporary phenomenon within its real life context especially when the boundaries between phenomena and context are not clearly evident". He explains that case study research is useful when seeking to establish the 'how' or 'why' of something taking place where the central individual lacks control to influence the event. The case study methodology is most commonly used to support research in its exploratory stage and can assist in answering the 'how' and 'why' questions as opposed to 'who' and 'what' which are usually answered by surveys, interviews and archival documents (Chataway et al, 1998). Rowley (2002) challenges case study research as lacking rigour and objectivity, however Eisenhardt (1989) defends case studies as a useful and complementary method to other methodology in the same study. Schramm (1971) describes a case study as a reflection of a set of decisions, why they were taken and how they were implemented.

To support case study methodology a stake holder analysis can assist to identify the main players in the phenomena and may help to explain the context in which the events take place. Langrish (1993) suggests the fundamental aim of a case study is to "unravel causation" specifically seeking to understand the relations between behaviours of different actors. A stakeholder analyses is a tool to generate knowledge about actors and to understand their behaviours and relationship and how that may affect process (Varvasovszky and Brugha, 2000). This research will endeavour to undertake a stakeholder analysis to assess the support for and the power to influence policy implementation of BFHI. The 'case' in this research is the maternal and child services in a rural setting and the implementation of the BFHI policy within those services. It is a process over time, influenced by many factors, and evolves within the setting in contrast to a cross sectional study where it is limited to a snapshot in time.

Study Design and Setting

The study design will constitute a single unit of analyses case study that is descriptive and explanatory. The ‘case’ is defined as ‘the process of implementation of BFHI within the sub-district of Breede Valley’ over a period of time whereby the Principal Investigator (PI) will review the process of implementation of specifically BFHI Step three (Inform all pregnant women of the benefits and management of breastfeeding) . A case study approach was selected because as Yin (2009) describes, it is an investigation of a phenomenon, in this case BFHI implementation; that occurs within a real life social context, the maternity setting; and is affected by multiple variables within the health system.

The study will initially be descriptive and subsequently take an analytical approach to the data collected. Mixed methods will be adopted by consulting pre-existing documentation, and conducting qualitative exploration of the attitudes and perceptions of the health cadre involved in the policy implementation. The study’s purpose of enquiry is to investigate the drivers of and barriers to BFHI policy implementation which can assist the PI in determining a hypothesis for future research. The setting will be maternal and child health services within rural health facilities including Worcester Hospital in the Breede Valley District a sub district of the Cape Winelands District under the governance of the Western Cape Department of Health.

Data collection

Data collection will be undertaken in five steps, however, the steps in the research will not be conducted in a step-by-step approach but rather iterative and cyclical.

1. Primary document collection and review – the PI will consult the recent BFHI appraisal to give insight into the reasons why the sub-district was unsuccessful in their efforts to achieve BFHI Step three

2. Stakeholder mapping exercise – the PI will identify the players involved and their role in the policy implementation process.
3. Focus group discussion – conducted by the PI and will discuss the perceived causes of policy failure by the health care personnel involved by utilising a cause and effect tool to guide discussion⁷
4. Key informant interviews – conducted by the PI to explore the key stakeholder perception of the policy implementation process and how they think it could be improved.

Site Selection and sampling

Site selection will be determined by the PI's current knowledge of the area and will be primary health care facilities situated within in the Breede Valley Sub District in the Cape Winelands District of the Western Cape. All of the sites to be selected provide maternal and child health services in the antenatal and the postnatal periods, including PMTCT service. The services will include community health care clinics that provide antenatal and postnatal services that refer into a secondary local hospital that provides in-hospital antenatal, labour, postnatal, neonatal and paediatric services. There are 10 primary health care facilities within this sub-district serving a population of approx. 18 500. All of these facilities are working towards BFHI accreditation but have yet to achieve their BFHI status⁸. The PI's primary occupation is as a Quality Improvement Advisor for an NGO based in the Breede Valley Sub District (Cape Winelands District). Permission to conduct the research in the selected area will be sought from the Western Cape Department of Health. The PI will conduct purposive sampling of the health care personnel (HCP), and will include medical and nursing health care professionals and lay counsellors. The population and key inclusion criterion will be health

⁷ The request to conduct a focus group discussion was denied by the sub district as it was thought that to remove staff from the services at one time would be disruptive to service delivery

⁸ Correct at time of writing

care personnel for whom the provision of maternity care or counselling is part of their primary occupation.

Starting within the community health care clinics, snowballing techniques will be used to identify and recruit the HCPs. The sample size will be a minimum of 5 HCPs but also determined by the content and quality of the data collected. The upper limit will be determined by the quality of data received and the sampling will be discontinued at the point of data saturation. The HCPs will include medical staff, midwives, nurses and lay counsellors involved in maternal and child health services. Operational managers who manage maternal and child health services day-to-day and those responsible for directly implementing maternal and child health policy in the facility will also be selected. It is estimated that the sample available may range between 5 and 10 for the key informant interviews which is appropriate for a case study as opposed to an epidemiological study where it is normal to have a higher number of participants. Recruitment will be conducted by the PI who will carry out telephonic and face to face personal discussions to secure candidate recruitment by adhering to ethical considerations and will provide prospective participants with an information leaflet.

Criteria for the selection of participants

HCPs will be eligible for participating in the study if:

- They are willing to discuss their perceptions of and practices towards BFHI implementation as related to the study topic and objectives.
- They provide direct patient care and support in BFHI implementation.
- They have insight into what BFHI means within maternity care settings.
- They have read and understood the information sheet and signed an informed consent form.

- Participants will be excluded from the study if they decline to participate in the study or are not comfortable discussing issues related to the study topic
- The anonymity of all participants will be maintained at all times. They will not be identified in the study under their cadre but instead by categorised by their level or degree of knowledge of BFHI.

The categorisation is as follows:

1. Specialised level participant – this level would include those whose primary occupation includes being directly involved with implementing BFHI.
2. Standard level participant – this level would be those who professionally support implementation at the ground level.
3. Basic level participant – this level would be those who support the professional staff to implement the policy at the ground level.

Analysis Approach

The analysis approach will be three fold: First, seeking to analyse the stakeholder mapping and collate the detailed information it elicits to provide an overview of the role of the players involved in the BFHI implementation process. Second, the focus group discussion and the interviews will be transcribed and thematic analysis will be employed to extract themes from the information collected. The PI will seek to establish common topics, and group them into categories by keywords and phrases and assign them codes. Third, the PI will also reflect on how her position as a researcher and a health professional herself, may impact on her analysis.

Respondent Validation

Once the data has been collected, preliminary findings (and their associated themes) will be

discussed with the participants to ensure validity. Participants will be given the opportunity to reflect on the data, and to express agreement or changes.

Ethical Considerations

The PI is aware that there are ethical implications in the recruitment of HCPs that may impact on service delivery however the researcher will ensure that the time expended will be at the convenience of the staff and make it clear that the participants understand that their participation is voluntary.

Ethical Approval will be sought and obtained by the Health Research Ethics Committee (HREC at University of Cape Town) and local government health authorities prior to commencement of the study. The PI is aware that in conducting this type of research it is crucial that confidentiality is observed and that the sources of information remain anonymous. The PI will reassure the participants that interviewing them does not in any way jeopardise their employment. Where appropriate, the PI will exercise discretion and respect for clients undergoing care, the PI will draw on her professional commitment to confidentiality as a health professional.

Prior to the interviews informed consent will be obtained from each individual interviewed (Appendix 1). There will be no physical risk to those included in the study however there may be a perceived risk of confidentiality being compromised; the PI will ensure confidentiality is upheld in order to allow informants to provide information without fear of reprisal or consequence. It will be made clear to the participants that there will be no risk to their job

status and they will not be identified by their name or place of work but only by their level of knowledge related to the BFHI implementation and by the district in which they work.

The perceived benefits are that the findings may contribute to policy change that may enhance the practice of the health care personnel by optimising the maternal and child services. There will be no reimbursement offered to candidates and time allowed for participation will be negotiated with the individuals and the health facility managers by the PI. There may be an impact on services due to removal of staff during working hours so the PI will make every effort to consult with staff members during breaks or after hours or investigate when there is periods of less activity and arrange interviews at these times. Refreshments will be provided at the cost to the PI and travel expenses if required for interviews outside of working hours. The data will remain in the possession of the PI and will be stored in a locked cupboard, or additionally password protected on a personal computer.

Dissemination of Findings

Feedback will be given to all managers at participating facilities as well as district level management. The following outputs are anticipated:

- A written report for stakeholders (health services, district management; South2South and the University of Cape Town)
- Feedback presentations of the study's findings will be arranged at the convenience of the service providers.
- As per the requirements of MPH mini-dissertation, a journal article draft will be prepared for submission to an appropriate academic journal, for example 'Health Policy and Planning' publication.

Authorship

The research will be conducted by the PI as part of her MPH at UCT but also with support of the employer of the PI, SOUTH to SOUTH, a programme within the Paediatric and Child Health faculty of University of Stellenbosch. The PI will be first author on publications emanating from this research, her supervisors and others will be invited as co-authors depending on their contribution.

Work plan

Katherine Brittin WORKPLAN - Dissertation for MPH													
		Jan-13	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Protocol (A) Submission													
HREC Submission													
HREC approval													
HIA submission													
HIA approval													
District approval													
Complete Literature review (B)													
Pilot Key Informant Interviews													
Conduct data collection													
Data Review and Transcription													
Coding													
Data Analyses													
Results write up													
Article write up with appendices (C)													
First draft review (A,B,C)													
Mature Draft for review (A,B,C)													
Editing, finishing off													
Submission for marking													
	Start and pending completion												
	Completed												
	Deadline												

Table 1. Expenses Budget for Proposed Research

Personnel Costs	Hourly Rate	Estimated hours	Budget	Actual
Research Coordinator (PI)	Time in kind	149	R00.00	00
Transcription			4000	3100
Operating Costs	KM rate	Estimated Mileage	Budget	Actual
Travel to sites	R2.2 per km	1000	2000	2500
Stationary			500	500
Hire of Tape recorder			300	00
Total Expenses			Budget	Actual
			ZAR 6800	5600

The time, transcription and travel costs and were supported by the PI's employer South to South at Stellenbosch University, all other costs were self-funded.

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PART B. LITERATURE REVIEW

Breastfeeding and Baby Friendly Hospital Initiative (BFHI) in the context of the South African Health System

Introduction

Based on a systematic review of studies conducted by the World Health Organisation (WHO 2013) in developed and developing countries and in agreement with the United Nations International Children's Fund (UNICEF), both institutions state that mothers worldwide should “exclusively breastfeed infants for the child's first six months, and, continuing to breastfeed until two years of age¹ with the introduction of appropriate complementary foods at six months to achieve optimal growth, development and health” (UNICEF, 2012). Breastfeeding, and especially exclusive breastfeeding, is listed as one of the most effective public health interventions to reduce child deaths globally (Jones et al, 2003; Lawn, Cousens and Zupan, 2005; Black et al, 2013).

Within the last decade, breastfeeding in the context of the South African health system has a complicated history, promotional efforts have been compromised by a lack of effective governance around breastfeeding policy; the practices and cultural beliefs of both the healthcare personnel (HCP) and the communities they serve; the provision of free infant formula milk as part of PMTCT interventions and the unrestricted aggressive marketing of commercial infant formula (National Department of Health, 2011).

¹ Gradual cessation of breastfeeding is recommended for the HIV exposed infant at 12 months if a suitable alternative milk is readily available.

In 2011, the National Department of Health published the ‘Tshwane declaration’ which in recognition of the ‘unacceptable high infant mortality rate,’ the current Health Minister declared South Africa as a nation that would ‘protect, promote and support breastfeeding’ (Motsoaledi, 2011). The Tshwane declaration resolved to refocus efforts towards implementing and accreditation of the BFHI ten steps to successful breastfeeding (figure 2) in health facilities by 2015. However, this initiative needs to be embedded in collaboration with an overall strengthening of every component in the South African health system (Bhutta et al, 2010).

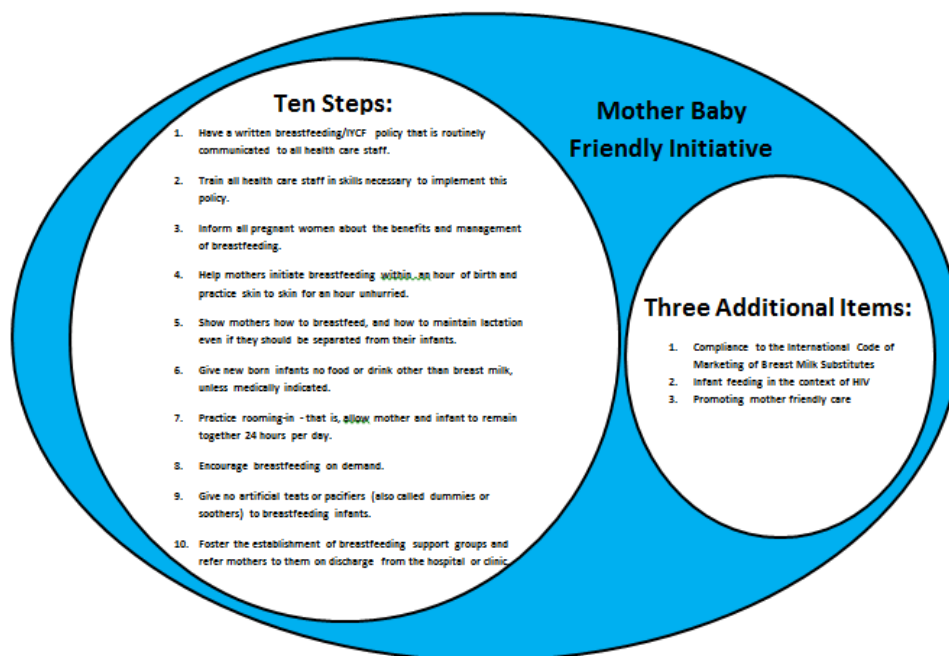


Figure 2. Mother Baby Friendly Initiative (BFHI, WHO/UNICEF, 2009)

There is a body of literature on the implementation of BFHI; however there is a dearth of literature available on implementation of the specific steps and none that feature only Step three (Inform pregnant women of the benefits and management of breastfeeding). In fact, in the literature reviewed, it appeared that Step Three was less of a challenge than other steps. Therefore, Step Three’s implementation maybe context specific to the research location

(Breede Valley Sub District) and an important issue that determines whether BFHI accreditation can be successfully achieved or not.

Methods

A literature review was facilitated by scoping documents that discussed implementation of BFHI, specifically Step Three and the health system factors that affect policy success. Papers were included from the time of BFHI inception, therefore literature dating as far back as 1992 was considered. The databases 'PUBMED' and 'Google Scholar' were used to research the literature using the following search key words and the inclusion criteria and parameters (See Table 1).

Table 1. Search terms and inclusion criteria

Search Terms	<ul style="list-style-type: none">• BFHI AND policy implementation• BFHI AND implementing Steps• BFHI AND health system• BFHI AND policy analysis• Breastfeeding implementation• Exclusive breastfeeding• Baby friendly• Mother baby friendly• Health System AND Policy Analyses• BFHI AND Step Three• Health System
Inclusion Criteria	<ul style="list-style-type: none">• Empirical studies or documents with an empirical base• Printed in english language• Full article accessible• Focus on BFHI and/or Health Systems• Considers the process of BFHI policy implementation and the health system factors influencing the implementation of BFHI policy

The literature available on BFHI or breastfeeding policy implementation was predominantly international scholarly articles, many from the United States and less from the United Kingdom. Almost all had a focus on public services and often in a lower socio economic setting. Seven of the articles concentrated on the South African context. There was, however, a lack of literature examining the implementation of a single specific step of BFHI although one report sought to provide an investigation into the implementation of all the steps but analysing them individually albeit in a broader sense.

Implementation of BFHI

There is evidence that BFHI has made a direct impact on breastfeeding rates at the hospital level (Abrahams and Labbock, 2009). Implementation of the ten steps of the BFHI may also

promote breastfeeding exclusively and prolonged breastfeeding duration beyond discharge from a hospital or facility (Abrahams and Labbock, 2009). Infants born in an accredited hospital are more likely to be breastfed for a longer period if there is high service-based compliance with BFHI practices and recommendations (Marais et al, 2010). However, one study has suggested that if breastfeeding initiation rates are already high, and evidence-based practices are common, then implementation of BFHI has little effect on both exclusive or any breastfeeding rates (Brobibb, Kruske and Miller, 2013). This study was conducted in Australia and it may be similar in other developed countries where the health system and organisational culture are more likely to offer health promotional programmes (Schmeid and Gribble et al, 2011). In the United Kingdom, a study exploring the relationship between accredited hospitals and higher breastfeeding rates concluded that accredited hospitals are more likely to have higher rates of breastfeeding initiation but this has limited influence on the duration of breastfeeding, hence the authors recommended additional interventions to improve breastfeeding rates (Bartington et al, 2006).

The seven articles within the South African context of BFHI implementation provided an insight into some barriers and enablers. Two of the articles were specific in their intent with one assessing the challenges towards BFHI and recommended that availability of guidelines, monitoring of counselling, and optimal staff training were an enabler supporting implementation (Mkontwana, Steenkamp and Von der Maritz, 2013). Another recognised that political will, a commitment towards implementation and capacity building of staff would better enable implementation of breastfeeding strategies (Du Plessis and Pereira, 2013). Daniels and Jackson (2011) focussed on the knowledge, attitudes and practices of the HCP and concluded that there was resistance to the behaviour changes required to enable, and improve implementation. An insight into why women stop breastfeeding by Doherty et al

(2012) explored the different levels of the health system that may affect women's decision making and behaviour such as the quality of antenatal counselling especially for HIV positive women, and highlighted suggested enablers at the community level as improved communication around the benefits of breastfeeding. At the organisational health service level ensuring all health care personnel were trained and that facilities become accredited with BFHI. At the higher policy making level enforcing the international code of breast milk substitutes and removing free formula milk from public facilities for HIV positive women.

The remainder of the articles looked at the challenges associated with policy change within the context of infant feeding and HIV (Ijumba et al, 2013; Zulliger, Abrams and Myer, 2013) and highlighted the issues of conflicting messages as a barrier to women successfully breastfeeding and a need for improved communication strategies especially around changes in the infant feeding policy to ensure HCP and clients are aware of changes to policy and the rationale behind the changes..

BFHI through the health systems lens

In this paper, the review of literature on the implementation of Step Three of the BFHI process will be framed by applying the WHO Health Systems 'Building Block' framework to this literature review (WHO, 2007). The rationale for this is that BFHI as with all policies has an effect on and is affected by all components of the health system, one building block is likely to impact another. The identified barriers and enablers provide insight into the 'why' and 'how' a policy is successful and can provide the information to assist with understanding policy success or failure in general.

The WHO describes a health system as comprising “all organisations, people and actions whose primary intent is to promote, restore or maintain health” (WHO, 2007). A well-functioning health system should provide equitable, efficient and safe health care of good quality, with maximum population coverage and accessibility (WHO, 2007). The WHO provides a simple framework that includes the interaction of six different building blocks encompassing leadership and governance; health workforce; service delivery; medicines and technology; information and financing. There are many other theoretical frameworks of the health system (Roberts et al, 2008; Horner and Hirsch, 2006; Gilson, 2007). In the case of BFHI implementation although all the building blocks can affect implementation, the building block ‘information’ was selected to examine further as information has a direct influence on all the other components of the health system. Information may include policies and strategies, training and education, health data and health promotional information. Examples of how information can affect the health system include the methods that leadership/management use to interact and communicate with their workforce; how information is disseminated throughout all the levels of the health system; how health care personnel delivers the information to their clients

The type of information and the methods in which it is disseminated can impact both negatively and positively on the knowledge, attitudes, and practices of the health workforce implementing the policy on the ground. The interpretation of the information and how it is applied may compromise or accelerate efforts towards BFHI accreditation depending on the implementation approach; the availability of evidence based training and the retention of capacitated staff within the system (Schmeid and Gribble et al, 2011).

Analysis of information received and created within the health system and its subsequent translation to the health workforce determines how the services are delivered within the system. As a policy and a vital source of information, suboptimal integration of BFHI reinforces the perception of it being a vertical programme whereas success depends on integration throughout all relevant current health programmes such as ‘Basic Antenatal Care’, ‘Prevention of Mother-to-Child Transmission’, and ‘Integrated Management of Childhood Illnesses’ programmes (NDOH, 2008).

Leadership buy-in and implementation of supporting policy strategies is described as the foundation to success (Semenic and Childerhose 2012 et al). Symptoms of weak leadership may include poor information dissemination and communication within the organisational culture (Hackman and Johnson, 2013), which could be a factor in determining the success of policy implementation. This in turn, may reflect in the quality and quantity of information provided to the population it serves.

The influence of the community and service users can be regarded as a component that plays a major role in the ability of facilities achieving BFHI accreditation. The information provided and the way the service users receive it is crucial to their decision making and the subsequent impact of their health behaviours on the entire health system (WHO, 2010).

This discourse is demonstrated in Gilson’s interpretation of the health system where the trust level in the relationships between the service user and service provider frames the actors at the centre of their influence within the health system (Gilson, 2007). Within the social

context the framework places the HCP knowledge, attitudes and practices at the centre and suggests that the trusting relationship between employer and worker may then lead to a similar relationship between provider and client resulting in improved client responsiveness (Gilson, 2007). The relationship between HCP and client is an important component of the ‘software’ in the health system that motivates individual health behaviour change to improve overall health outcomes.

The relationship between the implementation of the BFHI policy and the health system is multifactorial and complex. Walt and Gilson’s (1994) ‘policy triangle framework’ demonstrates that the policy implementation process is not only determined by the content of the policy, but also by the interaction of the actors and the context in which the policy is being introduced. The purpose of the framework has been interpreted by Sannevig et al (2013) as inviting the questions, of not only; “what happened” in the policy implementation process, but also; “what explains what happened”. The way information is cascaded down through the different levels of the health system may explain this phenomenon.

The levels are described as the ‘macro’ level, defined by Gilson (2012) and Orgill et al (2013) as the national level of the health system but may also be influenced by what is relevant globally and refers inter alia to policy and strategic development. The ‘meso’ level, defined as the local level which refers to the district health system and the organisations within in it, such as hospital and the PHC facilities (Gilson, 2012; Orgill et al, 2013). Lastly the ‘micro’ level, defined as the interactions between service provider and service user (Gilson, 2012; Orgill et al, 2013). Analysing the health system in this multilevel way allows for an intervention or programme to be examined in components, and to understand the effect

of factors in a specific context within the health system which may include different actors and influences than other levels of the organisation.

When specifically examining information and how it is utilised across the different levels of the health system, at the macro level of the system, a study reviewing implementation of BFHI across six countries discussed the importance of evidence-based advocacy and employing celebrity voices to promote breastfeeding as the best infant feeding choice (Mangasaryan and Martin et al, 2012). The study also highlighted the importance of high level promotional activities such as world breastfeeding week in creating awareness around the importance of breastfeeding especially in the lower resourced setting (Mangasaryan and Martin et al, 2012).

In a South African study it was concluded that developing advocacy strategies around breastfeeding activities has been neglected, and efforts are required to improve the delivery of health promotion messages to both the HCP and mothers (Du Plessis, 2014; Labbock et al, 2013).

The shift in PMTCT policy to encourage exclusive breastfeeding and the removal of free formula milk from public clinics has received a mixed reception in many parts of South Africa, but especially the Western Cape, which is in a transitional stage of phasing out the free formula milk.

The policy change has led to confusion for not only mothers, but also those who provide care to infants. This shift has resulted in conflicting advice as there is a sense of ‘catch up’ on

keeping well informed of new developments (Goga et al, 2012; Chisenga et al, 2011). The absence of a clear communication strategy around the reasons for the PMTCT policy change resulted in much speculation about the changes made (Ijumba and Doherty et al, 2013). Ijumba and Doherty et al (2013) recommend using a multi-pronged approach; utilising communications channels such as the media, promotional literature and meetings to improve communication around changes in policy. Around the same time as the change in PMTCT policy, the NDOH changed the name of BFHI to MBFI, a change which also lacked adequate communication on the ground. In addition, the MBFI policy is embedded within the ‘Infant and Young Child Feeding’ policy which includes not only the ‘Ten Steps’ and ‘three items’ but also guidelines around infant feeding in the context of HIV, safe formula feeding and appropriate complementary feeding. The interpretation or misinterpretation of the policy was also highlighted as having an impact on the successful implementation (Schmeid et al, 2011)

At the meso level of the health system “continuous and effective leadership” is highlighted as a factor for success in advocating for breastfeeding support and to integrate the policy into existing health programmes (Mangasaryan and Martin et al, 2012). Nickel et al (2013a) discusses management support as intrinsic to a “collective commitment” towards policy success. Semenik et al (2012) suggest that it is not only support that is required by management but an awareness of the way they communicate and disseminate the policy through the health system. Semenik et al (2012) further recommend that strategic planning is inclusive of frontline staff in decision making and that management are deliberate in their approach to the change management process. This would help ease the transition and acceptance of new policies and guidelines. The interactions and information a woman receives at the micro level of the health system will have a significant impact on a women’s decision making process.

A study investigating the knowledge, attitudes and practices of HCPs in Cape Town towards BFHI reported that most of the health care personnel interviewed perceived that their role in BFHI is to inform and educate mothers, and to promote awareness of breastfeeding (Daniels and Jackson, 2011). This finding is intriguing, given that the BVSD is finding these steps the most challenging to implement, this may be due to the communication issues and the methods of policy information transfer.

In a systematic review of literature from 16 different countries Semenik et al, (2012) highlighted that inconsistent advice and conflicting messages from the HCP at all levels are recognised as a problem that needs to be addressed, this is also echoed in US (Grizzard and Bartick et al, 2006) and local literature (Marais and Koornhof et al, 2010) In addition, the information provided is often based on the HCP personal experience which in turn determines their attitude towards breastfeeding (Semenik et al, 2012). Many studies reflect a negative attitude towards breastfeeding by the HCP, and the implementation of the policy is subsequently poor (Bartick and Edwards et al, 2010; Daniels and Jackson, 2011; Schmeid and Gribble et al, 2011).

The way breastfeeding messages are conveyed was also noted as crucial, and even in developed settings, antenatal education regarding breastfeeding in the UK has been criticised for being either “overly scientific” or “school-like and patronising” and recommends offering messages in a more family/woman-centred way (Hodinott, 2012). Sensitive interpersonal counselling between mothers and the HCP is seen as vital to empower women to succeed in breastfeeding (Mangasaryan and Martin et al, 2012).

In conclusion, it would appear that available literature lacks exploration of how specific steps are implemented, but rather provides an overview of the barriers and enablers within the whole policy implementation. In addition, the scope of the literature is even broader in that it examines how infant feeding strategies are implemented and how this affects women's decision making and behaviour towards breastfeeding, without little evaluation of the challenges to implementation which impact on the integrity and quality of the messages provided.

The impact throughout all levels of the health system is highlighted in some literature explicitly and sometimes implicitly. The factors that are identified as potential barriers and enablers are the knowledge, attitudes and practices of the HCP. This 'software' of the organisation appears to have an impact on the process of effective communication throughout the system at all levels and how information is disseminated and translated throughout the organisational levels. These factors appear to be influenced inter alia by the HCP's own personal and professional experiences and in turn; how policy changes are communicated, and the role of management and leadership in communication therein. The results of this study may provide insight into how the context above has led to potential mismanagement of interventions to adequately inform women about breastfeeding. It is the intention of the PI to further explore the role of information at all levels to gain an insight into how this can be improve.

PART C: ARTICLE MANUSCRIPT

Journal targeted: 'HEALTH POLICY AND PLANNING'¹

Title of article: Barriers and enablers to the health system building block 'information' in the implementation of Step Three of the Baby Friendly Health Initiative (BFHI) in rural South Africa

KATHERINE BRITTIN

KEY MESSAGES

- Information and communication are accepted as important factors that influence all levels of health system functioning.
- To make informed decisions around breastfeeding, women require health care providers to provide consistent, non-conflicting messages delivered in an effective way.
- Personal experiences of health care providers can influence the type and quality of information offered to women.
- Facility level management have a powerful role to play in successful implementation of policy when there is evidence of their support for the policy.

KEY WORDS: *BFHI, Baby Friendly, Policy implementation, Health systems, Information and communication, breast feeding, breastfeeding in South Africa*

¹ Instructions for authors in Appendix 8, authors' contribution and information are excluded. For the purpose of this thesis, the student is the sole and first author of the work.

Abstract

Exclusive breastfeeding is recognised as a key child survival strategy in the South African context and there is renewed focus on public health facilities to implement the ‘ten steps to successful breastfeeding’ to achieve Baby Friendly Hospital Initiative (BFHI) accreditation.

There is a dearth of literature around the local implementation of specific steps of BFHI. Key informant interviews of different cadre at the facility level were conducted to examine information dissemination and translation around the implementation of Step three (Inform mothers of the benefits and management of breastfeeding). The health system building block ‘Information’ was acknowledged as significant as a barrier and enabler to the successful implementation of the BFHI policy in facilities. The findings were analysed through the ‘macro’, ‘meso’ and ‘micro’ levels of the health system.

Results found that the knowledge, attitudes and practices of health care personnel may be affected by their own personal experiences, the role of management in policy information dissemination and leadership and the evolution of the policy may directly all affect the quality of information and support mothers receive about breastfeeding and consequently implementation success.

Recommendations include supporting health care staff to ensure they have the skills through training and their own positive personal experience to empower clients to make autonomous decisions. At the organisational level, utilising the influential position of operational managers to successfully implement policies at the ground level and ensuring that healthcare personnel understand why policies have changed enabling them to provide the current accurate information for their clients.

BFHI implementation is influenced by many health system components at different levels.

This research highlights the need to probe further into the process of information translation and dissemination related to policy roll-out in general.

Introduction

It has been three years since the National Department of Health (NDOH) published the Tshwane declaration which confirmed South Africa's commitment active promotion, protection and support of breastfeeding. In response to the "unacceptably high" infant and child mortality rates (Motsoaledi, 2011), the Minister of Health concluded that all maternity facilities should become accredited with 'Baby Friendly'² status by 2015 to improve exclusive breastfeeding³ rates and to accelerate the progress towards Millennium Development Goal (MDG) 4 where South Africa is currently not on target.⁴ Achieving 'Baby Friendly' status⁵ would ensure that women would enter the maternity services environment that would provide specific standards of care and create a culture that would provide accurate evidence-based advice in addition to practical assistance and support to women to successfully breastfeed (UNICEF/WHO 1992).

Breastfeeding is recognised as a key child survival strategy in South Africa specifically and on a global scale (Jones et al, 2003; Edmond, 2006; Black et al, 2013). South Africa has high mortality and morbidity rates due to malnutrition and other illnesses that could be averted through optimal breastfeeding and complementary feeding (Jones et al, 2003). Thus, it is perhaps not surprising that there have been renewed efforts to reinvigorate the promotion of breastfeeding in the South African context (Western Cape Department of Health, 2011).

² In 2011 the NDOH changed the name of the 'Baby Friendly Hospital Initiative' (BFHI) to 'Mother Baby Friendly Initiative' however for the purpose of this research policy shall be referred to as BFHI.

³ Exclusive breastfeeding is defined as feeding an infant no other foods or fluids other than breastmilk prior to six months of age.

⁴ Millennium Development Goal 4: reduce child mortality by two thirds by 2015

⁵ Baby Friendly status means being accredited by passing an assessment conducted by the BFHI accreditation committee in fulfilment of the Ten steps and three items to successful breastfeeding

Background

There is evidence that a facility with BFHI accreditation has higher rates of successful initiation of breastfeeding and that women are more likely to continue breastfeeding for longer (Kramer et al, 2001; Merten et al, 2005; WHO, 2013). There is also evidence that the initiative has ‘measurable and proven impact’, increasing the likelihood of babies being exclusively breastfed for the first six months. Infants born in an accredited hospital are more likely to breastfeed longer if there is high service-based compliance with BFHI practices and recommendations (Marias et al, 2005).

In the Western Cape only 18 out of 51 facilities have achieved BFHI accreditation (Western Cape Department of Health, 2011; National Department of Health, 2008) and at present there is only one out six facilities in the CWD that has attained accreditation. BFHI Step three (‘Inform women of the benefits and management of breastfeeding’) has persisted as an area of particular concern as it is one of the ‘ten steps of successful breastfeeding’ (Figure 2) that the area of study, Breede Valley Sub-District has been unable to achieve. Step Three is crucial to the success of many of other steps, if women are denied this information then it is more likely that they will experience problems with breastfeeding and may stop breastfeeding early denying their infants the nutrition that will ensure optimum health. BFHI Step three has been highlighted by the Western Cape’s ‘Restoration of breastfeeding task team’ (2011) as an area that requires province-wide attention. All of the reasons listed above motivated the following research in this particular area of BFHI.

Barrier and enablers of providing the ‘information’ required throughout all levels of the health system may include the effective dissemination of evidence-based information which

is pivotal to support the implementation of BFHI. A potential, enabler evidence-based advocacy for the policy has been reported as a neglected area (Du Plessis 2013; Labbock et al, 2013) and has been identified as an important factor at the national level of information and communication (Mangasaryan and Martin et al, 2012.). The information a pregnant woman receives to enable her decision-making may be affected by a number of considerations. The change in PMTCT policy shift also merits consideration. Until recently women were told to exclusively formula feed their infants however, more recently the policy shift advocates for exclusive breastfeeding as the preferred choice but was the information around the policy change adequate? Mothers who are HIV positive receiving free formula milk from public facilities has created confusion for both health care personnel (HCP) and women alike as it gives a contradictory message to mothers (Goga et al 2012; Chisenga et al, 2011). Communication around the motivation for the policy changes was limited and made it difficult for both the HCP and the women to accept (Ijumba and Doherty et al, 2012). The role of management in the communication process of cascading information has also been criticised and there is a need for improved strategic planning around information dissemination surrounding policy implementation (Nickel et al, 2013b).

At the individual level, knowledge, attitudes and practices of HCPs have been reported to have a significant influence on the information women receive, and in addition conflicting advice and inconsistent messages are detrimental to a woman's decision-making around infant feeding (Semenic et al, 2012; Grizzard and Bartick et al, 2010; Marias and Koornhof et al, 2010). Personal experiences of the HCP themselves with breastfeeding and the support they received during their breastfeeding period may also influence the information they in turn provide for the women they care for.

The area of study is located within a rural area of the Cape Winelands, Breede Valley Sub District (BVSD) but specifically in the primary health facilities that provide women and children services. It is a location with one of the lowest HIV transmission rates, but an area with a higher than the national average incidence of diarrhoeal disease (Bamford 2013). Although exclusive breastfeeding for up to six months is promoted, recent research on breastfeeding practices in BVSD, suggests that the rate of exclusive breastfeeding is 6% (Goosen, unpublished) which is lower than the meagre national figure of 8% (SADHS, 2003).

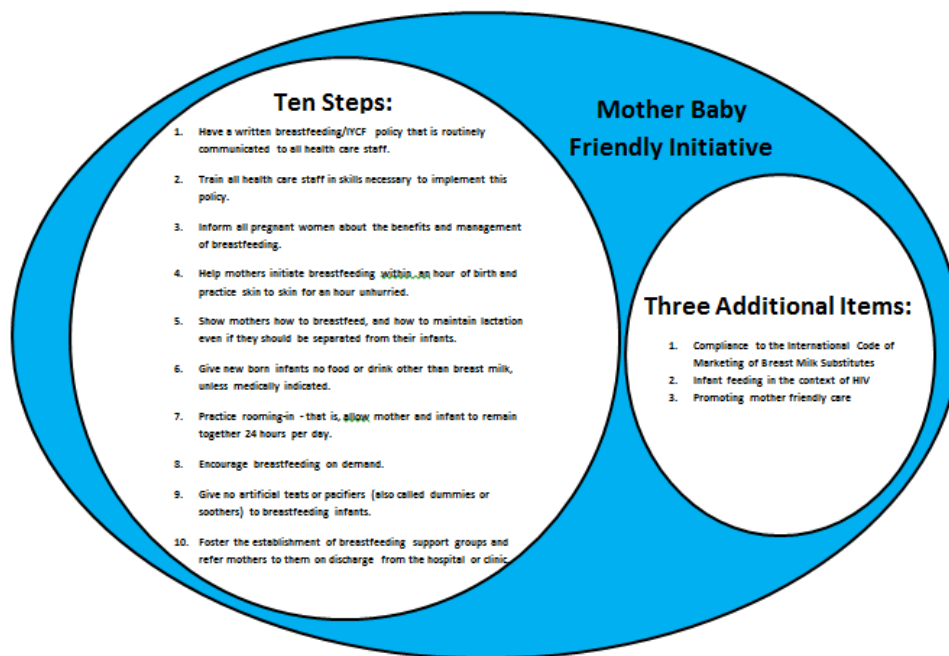


Figure 2. Mother Baby Friendly Initiative (BFHI, WHO/UNICEF, 2009)

This research focussed on the health systems building block ‘Information’ (WHO, 2007). The WHO describes ‘Information’ as being “the foundation of decision-making across all health system building blocks and it is essential for health system policy development and implementation...” (2010: 43). This document goes on to list the four key functions of information in the health system as “data generation, data compilation, data analysis and synthesis and lastly communication” (WHO, 2010: 43). This study explores how information

is disseminated throughout all ‘levels’ of the health system, these ‘levels’ are identified as the ‘macro’, ‘meso’ and ‘micro’ levels (Figure 3).

The macro level is defined as the national level of the health system but may also be influenced by what is relevant globally and refers inter alia to policy and strategic development (Gilson, 2012; WHO, 2002; Orgill et al, 2013). The meso level is defined as the local level which refers to the district health system and the organisations within in it such as hospital and the PHC facilities and the community (Gilson, 2012; WHO, 2002; Orgill et al, 2013) The micro level is related to the individual and the relationships between HCP and client and their interactions (Gilson 2012; WHO, 2002; Orgill et al, 2013).

Information at the macro level includes the global and national strategies that inform the service delivery priorities at the lower levels of the health system. The interpretation of this information at the meso level is how policies are interpreted and applied at an organisational level and the communication between the managers and the HCPs, has an important role to play. Once the information has cascaded down to the micro level, that is, between the HCPs and the service users is the measure of whether policy implementation is successful and will be reflected in the health outcomes of the population. This research is predominantly focussed on the barriers and enablers of information related to BFHI implementation at the meso and micro levels of the health system.

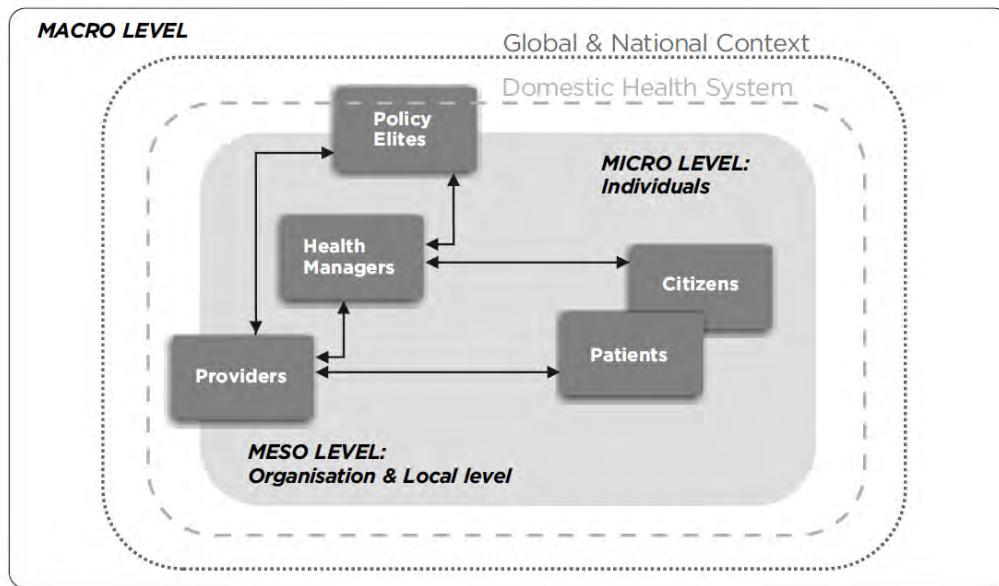


Figure 3. The macro, meso and micro levels of the health system (Gilson, 2012)

Methods and Approach

This study has adopted a case study approach, the case being the experience of implementation of BFHI within maternal and child health services located in rural public primary health facilities in the Breede Valley Sub-District. Site selection was purposive, resulting in 5 sites being selected and initially determined by the PI's current knowledge of the area, however the sites that were finally recruited was determined by the willingness of the HCP's to be interviewed for the key informant interviews. All of the sites to be selected provide maternal and child health services in the antenatal and the postnatal periods including PMTCT service. All of these facilities are working towards BFHI accreditation but have yet to achieve their BFHI status⁶. In addition, snowballing techniques were used to identify and recruit the HCP's who currently worked within these selected sites. The recruited participants included the following cadres for the key informant interviews; management, medical and nursing/midwifery staff, allied health professionals and health care workers, (n=10), however

⁶ Correct at time of writing

to ensure confidentiality they were not identified by their cadre but rather their level of specialised knowledge in implementation of BFHI. Those whose responsibility was to ensure successful implementation of the policy were assumed to have a specialised level of knowledge, those who were implementing the policy at the ground level were categorised as having a standard level of knowledge, those who supported the professional staff to implement the policy were categorised as having a basic level of knowledge of the policy. The participants were all women and all but one were mothers, all participants who had children had had previous personal experience of breastfeeding, no men were interviewed, this was not deliberate but in BVSD there are very few men employed in maternal and child services.

Ethics approval was granted by the Human Research Ethics Committee at University of Cape Town, in addition, permission was granted by the Western Cape Department of Health for access to sites. All participants were provided with information about the study and offered an invitation to participate. Participant confidentiality and autonomy were protected at all stages of the research.

Data collection included a stakeholder mapping of the HCP interviewed (Appendix 7) and 10 semi-structured key informant interviews and a consultation of key documents, however there was no documents⁷ available for review but the PI received confirmation from the local dietitian who was part of the accreditation process that the Sub-District had failed to achieve BFHI Step three. The literature review critically analysed documents related to the health system frameworks, BFHI, and policy implementation to identify gaps in the material that perhaps the research could address. The stakeholder mapping identified the main players

⁷ The PI requested a copy of an accreditation review but only received a one line email response to confirm that BFHI Step Three has not been achieved

involved and their position and level of influence in the policy implementation process. The key informant interviews were used in an exploratory approach by conducting private semi-structured, in-depth interviews to explore the perception of the policy implementation process and how participants think it could be improved (Interview Guide, Appendix 3; Transcripts, Appendix 9). A focus group discussion was intended but due to logistical reasons and an inability to remove so many staff from the services at one time permission was denied.

Out of all of the BFHI ten steps, Step Three (Inform pregnant women of the benefits and management of breastfeeding) relates to the building block ‘information’ and is one of the ten steps to successful breastfeeding that BVSD has found particularly challenging to implement and it is directly related to the micro level of the health system i.e. the communication between individual and HCP. It is important to determine why it is challenging to implement Step Three as it is crucial to ensure that women receive adequate information for them to succeed in breastfeeding and to enable them to care for their infants which is the best opportunity to ensure improved health outcomes in this population.

The data analysis method adopted was Applied Thematic Analysis that was iterative and inductive. A systematic process of data reduction techniques was used to identify preliminary key themes in the text and aggregated and labelling of codes using the thematic analysis software ‘Atlas Ti (Scientific Software, 2012). Further coding within each theme was undertaken and then an identification of linkages between the themes.

In addition to the interviews, the PI conducted a stakeholder mapping exercise to examine the extent of the support that the different stakeholders offered towards the policy and also their power to influence the implementation of the policy. The method was to score each of the stakeholders on their overall power level to implement the policy, they were then allocated points depending on their level of interest and values placed on the policy; their support for implementation, their power resources and their degree of limitations to implementation.

Case Study Findings

The findings of the case study explored the barriers and enablers to providing information across all levels of the health system on the implementation of the BFHI Step three (Inform all pregnant women of the benefits and management of breastfeeding). The case study was conducted over a period of a year within the BVSD and encompassed four facilities, including one MOU facility and three PHC facilities. All of these facilities were part of the collective process of the sub district working towards BFHI accreditation. The expectations on the ground level staff was to ensure all pregnant women were counselled during pregnancy in the benefits and management of breastfeeding.

Micro level of the Health System

At the micro level of the health system the stakeholder mapping (Appendix 7) revealed the ‘community’ as the key stakeholder group however the lay counsellors, medical staff and nursing staff crossed both micro and meso levels. The medical staff and the community demonstrated the lowest ability to aid policy implementation but the nursing staff due to their broader and more frequent access to the frontline, scored higher in their success rating to successfully implement the policy.

The results from the key informant interviews demonstrated at the micro level that the provider/client relationship and how their knowledge, attitudes and practices impact on the information they offer mothers can influence the mother's decision-making around their feeding choices.

All of the participants were fully in favour of promoting breastfeeding as the best and safest way to feed infants, but recognised their own personal experiences and that of the other HCP with breastfeeding and the support they received had a significant influence on the information that women received especially in their decision-making to breastfeed. Where they had had a negative experience this could be a barrier to them receiving the correct information.

"I think if they (healthcare personnel) had a bad experience it might impact negatively on the way that they give the message and speak to mothers. They would rather then maybe focus on the negative things that they had to deal with"

Specialised level participant (May, 2014)

Conversely the positive experiences that the participants had regarding support during their breastfeeding journey had a powerful effect on their attitude towards breastfeeding and some lamented that had they received better information in pregnancy their experience could have been greatly improved. In addition, they acknowledged that the first experience was challenging, but the experience prepared them for subsequent children.

"With my first child I did all the wrong things...before my second child was born I just promised myself I would get as much information as possible...then with all this

information that I gathered, it just became this wonderful positive thing that I can share with other moms.”

Specialised level participant (May, 2014)

Information translation to the client was seen as a very important barrier and enabler by all participants and most of the interviews discussed inconsistent messaging by different staff as a barrier to implementation on the frontline. Five participants highlighted repetition of messaging to women as particularly important in knowledge translation, and two spoke of a tool to support this method in the antenatal period. Two of the participants spoke of the importance of staff “*speaking with one voice*” when conveying messages to women.

“I would first check staff’s knowledge and check that they know what to say because if one staff member is saying one thing and another one is saying something different you are losing the battle, so I will first go and check the knowledge of the staff.”

Specialised level participant (May, 2014)

Conveying information in a way that empowered women was suggested as a crucial enabler to successful implementation and knowledge translation.

“What I usually do, if the mother is here with me I ask ‘Are you breastfeeding?’ Then she will say ‘Yes sister I am breastfeeding’ then I say ‘Do you see how beautiful your baby is, because you can see the baby is growing’”

Standard level participant (May, 2014)

It appears that conveying information effectively to the client can be challenging for the HCP and there may be a need for training in this area to assist with improving communication skills. This is not a matter of merely informing women, but paying close attention to *how* the

message is delivered and reflecting back to ascertain that women understand what they are being told.

“If you look at training its skills, knowledge and attitudes and the attitude that is a problematic one... the soft skills. Not every nurse is the good teacher and teaching is required...they are more comfortable with telling not teaching.”

Standard level participant (May, 2014)

Meso level of the health system

The meso level of the organisation of the health care services is concerned with the management of health services and how the management cascades the information down to the front line and how this information may be interpreted and applied. This was described as both a barrier and an enabler. The stakeholder mapping at this level identified the higher level management, facility level management and the dietician as the key stakeholders and demonstrated that on condition of buy-in and support for the policy from facility level management, they were deemed as the most significant enablers of all the stakeholders due to their dual role as link between upper level management and the ground level staff through their management and leadership.

The interviews revealed that the basic level participants were more likely to distinguish between the different roles of leadership and management, recognising that the day-to-day management of implementation of the policy came from the managers at sub-district and facility levels but that the dietician had an important leadership role and had a significant role in knowledge translation.

“She (dietician)...knows her work, if she didn’t know something she will find out and she will always come back to you... if she comes back to you and she tells you you’re

doing something good or she will tell you where you can improve.”

Basic level participant (May, 2014)

However, specialist level respondents suggested there was lack of credibility with the dietician in advising around some aspects of the policy, one stating especially where they had no frontline experience such as in the labour ward. They also expressed concern that the BFHI accreditation process was conducted solely by dieticians and there is a need for representation of nurses on the accreditation team. However, there was consensus that the dietician shows humility and appreciates their concerns. This suggests a willingness for inter-professional collaboration to invest in the relationship with the staff implementing the policy.

“There is the dieticians that evaluating us, we are like, ‘Who are you to tell us? We doing the work, you are not even a nurse!’... so it would be nice to get nursing staff on it to evaluate us...they actually gave us the policy and she said ‘Look, if you have a problem with something just say NO because this is not going to work, you are the experts here and we are just the dieticians’...so they don’t know if it’s right or wrong they are just doing their job of implementing the policy.”

Specialised level participant (May, 2014)

The hierarchy has been described as a barrier to the communication process with management levels presenting obstacles at different stages along the process. Communication barriers render progress slow, can be arduous and time consuming, resulting in a lack of enthusiasm due to the ineffectiveness of the communication process.

“You must go to your supervisor and she goes to her supervisor and so it is this vicious circle... everyone must get involved into the communication process, but if one decided perhaps it is not that big a problem then the communication just dies...”

You can be passionate about a problem and then after a period of time you realise nothing is happening with this and when you start to communicate about the process that you started you realise that it just dies”.

Standard level participant (May, 2014)

All of the participants believed that management supported the initiative to a certain degree but the participants with a specialised knowledge level were more likely to report that there was minimal support from management and there was a lack of vision around the policy. In addition they were more likely to report that there was a lack of practical support from management for implementation. The recognition that management needed to be more visible in the process was a recurrent theme in the research/conversations/interviews.

“I think it is really important that they must be visible to recognise what is going on (with BFHI), not just your problems but that if there is something good that happens that they know about that and then the other thing that if there is any problems that you can go to them and they will fight with you, not against you.”

Specialised level participant (May, 2014)

The management role was described as “checking” and ensuring accountability that the policy had been implemented rather than supporting implementation and that the incentive to do so was target-driven as opposed to outcome-driven. This approach had the potential to undermine support for the policy.

“Their role should be, they should actively get involved first of all so they (management) mustn’t just make the choices and say this and that and we at the end of the day we mustn’t just see it as targets so they must get involved.”

Basic level participant (May, 2014)

An infant feeding checklist tool had been implemented to support Step three but was being reported as proof that HCP's had given the information to the women, not whether the clients had understood the information.

“They (management) asked us to also attach the checklist on the antenatal card so that they can see what you did at the clinic. Did you give medication and all that, then you attach it (checklist) on the on the clients’ antenatal card.”

Basic level participant (May, 2014)

Three of the participants suggested that communication from management around the policy implementation and policy in general could be improved. They highlighted the reason for poor information dissemination may be due to inadequate understanding and/or a lack of participation in preparing for the implementation of policies.

“There is a lot of policy documentation which goes around and most people read the first two paragraphs and then push it aside, policy very rarely really gets implemented because there is lack of understanding; This cascading down of information is very poorly conceptualised and very poorly accepted.”

Standard level participant (May, 2014)

Information dissemination is conducted by management in different ways and the participants highlighted different methods that are adopted to communicate. The cascade of information from top level was seen as ineffective and information dissemination was believed to be poor around the implementation of Step Three of the policy.

“Really if I think now of the HIV policy that changed, your matron in charge, she will then communicate in different ways. The one way is she puts the policy on the board

and says: “Look, here is the new policy, just go through it.” The other way is in-service training and then she will go through the policy with you, clarify some of the points, if there are any problems about it then she will go back, ask the questions and come back to you.”

Standard level participant (May, 2014)

Macro level of the health system

The stakeholder mapping exercise (Appendix 7) identifies the NDOH and civil society as the key stakeholders at the macro level of the health system. This level encompasses the competing priorities of the health system, the strategic development and decision-making around implementation of policies. Information across the macro level of the health system originates at the highest level with the Minister of Health who is recognised for his efforts to support the BFHI policy by publishing the Tshwane declaration. This declaration provides an influential backdrop to the implementation. It was recognised that advocacy at this level was an enabler to promote support for the policy.

“Knowledge is power and to change what was perceived as the right thing to do, I think that takes time, so one has just got to be patient, persistent, perseverant and just go on plugging the message, but having a Minister of Health now who is enthusiastically supporting it has made the world of difference.”

Standard level participant (May, 2014)

The stakeholder mapping shows that despite the high power level at the macro level the key stakeholders such as the NDOH and civil society appear not to have the influence at the ground level that requires a policy to succeed. There is an inconsistency in the interpretation of the policy. For example the standard and basic level participants were less able to discuss

the ten steps of successful breastfeeding in detail. This disjuncture may be a result of poor information dissemination nationally and multi-level inconsistencies within the health system. The policy is a global initiative and was first introduced in South Africa in 1994 but it was challenging for staff members to interpret it correctly. However it was evident that non specialist staff did understand the benefits of breastfeeding and the broader benefits to the community.

“I think that will mean for us that were doing the work very well and we are in the direction of informing the mothers about breastfeeding issues so it will also not only benefit us but also benefit the pregnant women and their babies, I think that’s what we are looking at for our community.”

Standard level participant (May, 2014)

One participant described BFHI as a new policy and a new way of doing things in spite of the policy having existed in some form in South Africa since 1994. Another staff member believed that the policy was a reference for staff and a checklist of how things should be done to ensure a standard of care and also a tool for monitoring performance in policy success. A few (n=4) of the participants recognised the importance of its role in ensuring that breastfeeding women received the information they required.

“What my understanding is with this policy is that we must educate the mothers at their booking at the antenatal clinic, the importance of breastfeeding.”

Basic level participant (May, 2014)

Interpretation of the BFHI policy varied across the HCPs, those with a higher level of understanding such as the dietician and lactation consultant recognised it as a global initiative

and “what needs to be done”. The nursing and medical personnel were more likely to refer to the benefits of breastfeeding.

“Oh, for me it is about what is the best for our babies and it is you know it is not just a local thing or a hospital thing. It is a worldwide thing. It is about the health of mothers and babies and what is the quality of humans that we get in the end, you know? Are they healthy? Are they intelligent and emotional intelligent?... It is about the baby’s the whole future that lies ahead so it is really not just a one day thing. It is a lifetime thing that we are busy with here.”

Specialised level participant (May, 2014)

The participants emphasised the conflict between the previous PMTCT policy of recommending that women should safely formula feed HIV-exposed infants and the current promotion of exclusive breastfeeding with ARVs. All participants recognised the impact of the past PMTCT policy on current BFHI buy-in. They recognised the often detrimental implications of the information women received and the confusions caused among health care personnel and clients.

“As in the past they didn’t realise that the baby can actually not get HIV positive so they brought in this whole policy of formula... as they got smarter and they researched more they actually realised that rather breastfeed than formula... but the thing is that policy is now there and the patients. They still want formula milk, they still believe formula milk will be better for their babies so that really hinders us here to give the mother the information because out there in the streets they will go for formula milk... it’s going to take a lot to change that policy.”

Specialised level participant (May, 2014)

Two participants expressed strongly that the BFHI policy restricted a women's right to choose even though they did support breastfeeding as the best feeding option for all women. However, two of the participants confirmed that the current PMTCT policy to promote breastfeeding and ARVs was an enabler to policy success because it was explicit in promoting breastfeeding. Four participants felt that the frequent changes in the PMTCT policy were problematic due to ineffective communication during implementation. However, two participants highlighted that they understood the current information was evidence-based and that changes in the policy would be inevitable.

"We do have the PMTCT policy. It doesn't make it difficult but the PMTCT policy just changes a lot so it makes what we do - now you do one thing and then it changes again and I think it is the policy that changes the most, but I mean it is also incorporating new research so it is important to change."

Specialised level participant (May, 2014)

Discussion

The National Department of Health made a commitment to the improvement of breastfeeding services by supporting a renewed focus on public facilities to work towards and sustaining Baby Friendly Hospital Initiative (BFHI) accreditation by 2015.

The purpose of this research was to highlight the barriers and enablers to women receiving information to support implementation of BFHI Step three. The research aimed to investigate the effect of these factors on the implementation of BFHI with a view to provide the above recommendations to support those who are a part of the implementation process.

Barriers and Enablers to BFHI Implementation

It is reported in the BFHI assessment conducted in 2013 that women receiving the correct and comprehensive information in the antenatal period is a particularly problematic area that the BVSD needs to focus on in order to achieve BFHI accreditation. Data evidence showed that there was poor communication between the health system levels and between actors within in the health system; that mixed messages prevailed regarding the most up to date policies and that it was likely that providers' own experience of infant feeding impacted on their attitudes to promoting breastfeeding and the information they offered their patients, which may have contributed to the failure of achieving Step Three. The barriers and enablers that influence the information she receives are something to be cognisant of, so that she is supported in her decision-making.

It is clear that there are many barriers to women receiving the information at all levels of the health system; however, these barriers can be seen as opportunities for enabling the

information translation process. Pregnancy provides a long period of time for a mother to decide how she will feed her infant and breastfeeding occurs in the postnatal period and this may be the reason why the HCP feel that it is not a priority in the antenatal period. There maybe lack of understanding that preparing women is valuable and the information offered is relevant to the stage of pregnancy.

There is recognition that mothers require consistent repeated messages and that the HCP should not be conflicting in their views and practices. An absence of continuity of care from the HCP may also contribute to mixed messages. Lack of continuity of care can mean that women are seen in the Primary Health Care facility but are cared for by different staff at the MOU or hospital and women may be less likely to access services as regularly when they are faced with new HCP every time they attend the facility. It is acknowledged that it is the responsibility of everyone in direct contact with clients to spread the message of breastfeeding promotion. In addition community members are documented as being influential (USAID, 2012), however, there may be tension between the HCP and the community members, who may be family or influential people the woman knows. These relationships may also be affected by community perceptions of health care provision, formed through previous experience of the health facility. Historically, the advice on offer is now the converse of what is currently being recommended related to the PMTCT policy. Despite this, the role of community health workers - in bridging the divide between the health facility and the community - is particularly important especially in the postnatal period; they have a good understanding of the community and are sometimes often perceived as more credible sources of information.

The knowledge, attitudes and practices of HCP, especially when informed by personal experiences, can be both barrier and enabler and are highly influential in the information that the HCP provides. Positive experiences of staff can be extremely powerful. It is vital that as future role models, HCPs themselves are provided with the best support available to use their position to influence women in a positive manner

The role of management in guiding and disseminating information through the health system is observed as both a barrier and enabler. The importance of the management role emerges to be important in the success of implementation and there appears as if there is a need for higher input and visibility from the managers. Managers are seen as the gatekeepers and are accountable for the implementation of the policy, and appear to be evaluated for not being involved but also criticised for implementing accountability tools and structures. The managers may be supportive but are perhaps unsure how to provide the practical support that is required on the ground and are considered too far removed from the daily reality of the frontline services. The input is described as target driven so there is an assumption that the buy in to this policy isn't evident but it is being done to 'tick boxes'.

Accountability measures to assure governance can be perceived as helpful tools, or as a means of checking up on what needs to be done. The relationship with the management can dictate which way the frontline interpret the tools and audits. The need to gain accreditation could be seen as a target to achieve, and when the organisation is target driven, then the intent of the policy may lose value to the staff and clients. The drive required to achieve may sometimes be resented instead of acting as an incentive to achieve a level of quality care and the message is at risk of being lost. There was a feeling that it (BFHI) 'had to be done' and that it was "here to stay", which gave an impression that the staff were accepting that this was

a transition in approach that would be permanent. There is a realisation that BFHI is a long-term goal and that an understanding that accreditation may easily be removed if the efforts are not sustained. This long term sustainability requires monitoring and regular auditing to inform the management when decision-making, resulting in the patients' positive perception as being a measure of quality and consistency of care.

The perceived lack of buy-in from higher level management could be due to a lack of vision around the benefits of implementing the policy in relation to health outcomes and an inability to make the link. Improvement in data quality and monitoring and evaluation processes, as well as capacitating all levels of management and other staff to make use of them, would provide the evidence that is required to motivate decision-making. BFHI policy that has not been signed off by management implies that the process is time expensive and suggests that there needs to be a repetition of needs so that it remains on the agenda. Conversely the results from the stakeholder mapping exercise demonstrated that when the operational managers at ground level were supportive of the policy they had a very influential role in successful implementation and role modelling at facility level could potentially yield the best results in implementation.

The change in HIV policy has been paradoxically both a barrier and an enabler, the policy to support breastfeeding has for more than a decade been in conflict with the PMTCT intervention policy which has filtered down to the information that the women receives in the antenatal period and has directly affected a mothers decision-making around breastfeeding. The tension between preventing HIV infection and ensuring an infant is kept healthy through optimal feeding has at last been rectified through evidence, but the ability for healthcare

providers to adapt to the change in policy has been challenging and has resulted in conflicting information for mothers.

Any policy change is a challenge for the HCP, but in the case of PMTCT it has been subject to evidence based development and therefore inevitable change of the infant feeding and HIV policy. It was the dramatic turnaround in advice that staff and clients alike found difficult to accept, although the evidence was available, dissemination of the information to support this change in policy was slow to reach the frontline. There is recognition among many staff that the HIV policy is now supportive of breastfeeding, but HCPs feel the clients have difficulty in changing their mind set from formula feeding to breastfeeding. The revised infant feeding guidelines are especially challenging in the Western Cape where the policy to provide free formula milk remains⁸. This practice stands in contrast to the national approach which appears to have had a direct impact on successful BFHI implementation

Frequent changes in policy may also contribute to the effectiveness of communication of the policy; it is difficult to keep ahead of new developments but also there is need for a strategic approach to deal with new information and how it is communicated. The change of name of the policy from BFHI to MBFI may have led to confusion, the information around the new name was minimal and difficult to locate.

Interpretation of the policy will determine the information that the HCP cascade down to their clients and is also crucial to implementation, as it guides the patient care protocols that the HCP implement. Data evidence shows that many HCPs thought that the policy was different

⁸ At time of writing (changeable)

to the everyday care of the clients, that it was perceived as something extra instead of the way in which they give normal care to women.

Vertical implementation of BFHI and other programmes such as BANC, PMTCT, and IMCI may also compromise the policy implementation, and a need for integration throughout all programmes would assist in ensuring that consistent repetition of the same messages throughout the health system and the mother's journey through the continuum of care.

Conclusion

Information translation and dissemination is influenced by a complex mix of factors throughout the different levels of the health system including the service provider/client relationship; the knowledge attitudes and practices of the HCPs; the way that messages are conveyed to the clients; the way in which management disseminates information and the landscape of policy evolution.

By organising the findings via different levels of the health system (micro, mesa and macro) it is evident that implementation practice is influenced by factors at all policy levels (individual, institutional and national) and depicts the complexity of successful policy implementation within the levels.

The literature reviewed highlighted a gap in that there was little research related to the implementation of a specific step and in other contexts. Step Three didn't feature as being particularly problematic to implement. This research purposefully explores implementation of a specific component of a policy (Step three) and although context specific, the findings could be generalised to use in another setting implementing BFHI, and hence may well be relevant to other contexts and locations. In the case of BFHI in the South African context

there is a need for more research as to why certain ‘steps’ are adhered to and why some steps are more challenging to implement.

Recommendations at the individual level:

- Ensuring women feel empowered to make well informed autonomous choices around infant feeding by supporting their decision making with evidence based information.
- Recognising that the personal experiences of staff have an impact on their role in information translation and ensuring they themselves receive adequate support and information in their personal and professional capacity.
- Improving communication skills of health care workers to ensure knowledge translation is optimum.

Recommendations at the institutional level:

- Supporting all HCP to recognise the power they may possess in how the information is received and in practical application.
- Effective evidence based advocacy to ensure priority setting on the health programmes agenda will encourage management buy in and assist in the way information is disseminated throughout the health system.
- Ensure strong leadership, especially at facility level to improve information dissemination effectively down to the ground level.
- An appreciation that the motivation to change is complex for the HCP and clients alike, therefore adopting deliberate strategies to implement change in policy in a non-threatening way
- Ensure an understanding and good interpretation for the policy and its implementation especially by the management at facility level.
- Identify effective leadership to support implementation at all levels including in the community

Recommendations at the national policy level:

- Optimise communication of policy change through multi-media channels
- Provide clear rationale of why policy has changed
- Promote breastfeeding education in all health programmes

Implementing BFHI is a complex, context-specific activity and to ensure optimal implementation of Step three it is necessary to examine this particular area by using the recommendations as a framework in order to probe further.

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PART D: APPENDICES

Appendix 1: Key Informant Information sheet and consent form

Research Title - A case study of the drivers and enablers of implementation of BFHI in a rural sub-district setting

Location: _____ Job title/Occupation: _____

Site: _____ Address: _____

Interviewee: _____ Appointment/Time: _____

Focus notes: _____

Name of interviewer _____ signature _____

INTRODUCTION:

- a) **An Invitation to participate:** Thank you for considering to have this interview, this is merely an invitation to participate and I appreciate that your participation is entirely voluntary, if you choose not to participate there will be no adverse consequences to you or your employment status, you may also decline to answer specific questions and you may decline from participation at any time without reason. Please read this information and take time to understand the content, and then you can let me know if you would like to participate. You have been selected to participate because you are a health care professional who is in regular contact with pregnant women who receive Infant feeding counselling in the antenatal period therefore are active in implementing BFHI Step three (Inform all pregnant women of the benefits and management of breastfeeding

- b) **Research procedures:** The research will include a review of what is already written about the subject we will be researching, some interviews with health care professional such as yourself with a view to understand their opinions, also a group discussion with health care staff to get an overview of the current situation with regard to the implementation of BFHI Step three.
- c) **Introduction:** Let me introduce myself, I am Katherine Brittin, a student in the last year of a Master's Degree in Public Health course on the Health Systems track at the University of Cape Town. My background and foundation training is midwifery however my current occupation is a Quality Improvement Advisor for a HIV/TB programme within the paediatric and child health faculty for the University of Stellenbosch. My area of interest is in maternal and child health and I currently work within the sub district of Breede valley in the Western Cape. This research proposal is under the auspices of my experience in the field and a desire to understand why clear policy guidelines are not implemented. The research is to gain an understanding into stakeholder perceptions about the barriers and enablers within the health system to implementing BFHI Step three (Inform all pregnant women of the benefits and management of breastfeeding)
- d) **Time:** The interview will take up to an hour. If you are tired, or need to stop and do something else, please tell me and we can take a break.
- e) **Confidentiality:** Everything said in this interview will be treated as confidential as possible by the researchers. When we report on the findings, we make sure that everybody remains anonymous. We will ensure that my interviewing you does not in any way jeopardise your employment. Please feel free to talk openly. If you feel uncomfortable talking about something, or would rather not answer a question, please tell me. You do not have to answer questions if you do not want to.

- f) **Recording:** Do you mind if I record this interview? It's only for research purposes. That way I don't have to write down lots of notes while we talk. Nobody except the researchers will listen to the recording. **[Wait for the participant's response.]** Please speak clearly so that we can hear what was said on the tape.
- g) **Test recording:** Before we start, I would like to make sure that the tape recorder is working properly. **(Interviewer: start recording: say your name and the date, and say something light-hearted – like an observation about the weather today. Ask the respondent an innocuous question to get their voice –or ask about their age and occupation sitting in their natural position where they will sit for the interview. Stop the recording and play back to make sure it is working and that we can hear both your voices.)**

Appendix 2: Key Informant Interviews and Informed Consent Form

Research Title - A case study of the drivers and enablers of implementation of BFHI in a rural sub-district setting

Informed consent for participation in in-depth interviews - HCPs

The principal investigator (PI) Katherine Brittin is from the School of Public Health and Family Medicine at the University of Cape Town. As part of the research the PI intends collect information about the attitudes and practices of HCPs regarding implementation of BFHI Step three. The interest lies in finding out about providers' observations and perceptions of service delivery, and how they think such services could be improved. Your participation in this study is voluntary. Whether or not you decide to participate in this study will not affect your position at this or any other clinic now or in the future.

If you decide to participate:

- a) This will involve you answering and discussing questions put to you by the interviewer, for about 45 minutes.
- b) All of the information that you provide will be kept completely private and confidential and will only be viewed and used by the researchers on this project. The other HCPs at this clinic will not see this information.
- c) We will record the information using a digital audio- recorder so that we have an accurate record of what you have said, but we will never record your name or anything that could be used to identify you.
- d) You have the right to decide not to participate in the study, to refuse to answer any specific questions, or to end the interview at any time without penalty.

- e) The information you provide may help us to improve breastfeeding support within maternal and child health services.
 - f) Your participation in this study will not involve any physical or personal risks to you.
 - g) If there is anything that is unclear or if you need further information, please ask me and I will provide it. Is there anything else you would like to know? There are some questions below that you may want to consider
- Who is doing this study and what is it trying to find out?
 - What could happen to me, good or bad, if I take part?
 - What will I be asked to do?
 - What happens if I say no?
 - If I decide to take part in the research, how will it affect my daily life?
 - Will I have to visit the hospital/clinic more often? If so, how much more often?
 - How long will the study last?
 - What will happen if I change my mind and want to leave the study?
 - What must I do if I want to stop being in this study?
 - Will I be told the results of the study?
 - What will happen to my personal information?
 - If I have any questions, who should I call?
 - Who reviewed or approved this study?
 - What is a Research Ethics Committee?

I have understood that the purpose of the study is to investigate breastfeeding services, and to understand specifically the HCP's knowledge and attitudes in order to inform improvement in implementing BFHI Step three.

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction.

I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time without in any way affecting my position at this or any other clinic now or in the future.

Please indicate your consent with your signature, or a tick if you would prefer.

Are you willing to participate in the interview?

Yes _____ No _____

If yes, please sign below

Participant _____ **Date** _____

Witness to signature (Third party)

_____ **Date** _____

Contact details:

Principal Investigator - Katherine Brittin

University of Cape Town

Health Sciences

Department of Public Health

Falmouth Building

Email: katbrit11@gmail.com

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Study Supervisor – Kathryn Stinson

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Email: kathryn.stinson@uct.ac.za

Co supervisor – Jill Olivier

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Health Sciences

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Falmouth Building

Email: Jill.Olivier@uct.ac.za

Health Ethics Research Committee – Chair FHS, University of Cape Town

Appendix 3: Interview guide

The purpose of this research is to provide an insight into the barriers and enablers to implementing BFHI Step three (Inform all pregnant women of the benefits and management of breastfeeding). This is an area that is reported as challenging when implementing the BFHI ‘Ten Step to Successful Breastfeeding’. Within the current maternity care provision context in which women deliver their babies, most women leave hospital very soon after birth often within six hours which means that antenatal information and preparation of how to successfully feed their infants is very important.

HCP perspective

- 1. What does it mean to you to achieve BFHI accreditation for your facility?**
 - Do you have a clear understanding of BFHI and Step three
- 2. What do you think is the HCP’s attitude with regard to informing women of the benefits and management of breastfeeding in the antenatal period**

Probes:

- Consider first your personal view of how you feel about breastfeeding, what is your own experience and views regarding breastfeeding outside work
 - Now what would your own professional approach to breastfeeding, what is your professional opinion towards breastfeeding again reflecting on your own experiences in the workplace?
 - What do you feel is the attitudes of other HCPs? Please explain
- 3. What makes it difficult for HCPs to implement Step three (“discuss and encourage breastfeeding in the antenatal setting”)?**

Probes:

- Encourage discussion around the barriers from the HCP's point of view regarding, workload, feasibility, training needs, information available
 - Enquire around perceived responsibility around informing women around breastfeeding
 - Do you think there is a barrier to breastfeeding from the clients themselves and if so what are they?
- 4. What do you think is your role in successful implementation of Step three**

Probes:

- Who do you think is responsible for implementation of Step three, do you think it is the responsibility of management, the health care facilities or the HCPs themselves, if so what do you see as their responsibility
 - Who has the power to positively influence implementation of Step three
- 5. What aspects of the service delivery do you think encourage or discourage promoting breastfeeding in the antenatal period**

Probes:

- Explore a list of points that encourage and discourage
 - Explore why they are enablers and barriers
 - Is there specific times when you consider promoting breastfeeding inappropriate, if so when and if not, when?
 - How does the client's knowledge and attitude towards breastfeeding affect the advice that is provided to women?
- 6. Discuss infinite budget vs. limited budget – what would you do?**

CONCLUSION

We have come to the end of the particular things I wanted to ask you about. But before we close: are there any other issues or problems which are a challenge to implementing BFHI

Step three

1. If identified, what is the health facility management doing about it?
2. Is it okay to contact you again for further information and/or clarifications on the issue of breastfeeding at this health facility?

YES_____ NO_____

Please thank the participant and end the interview observations. After the interview, write up your notes and observations straight away

Appendix 4: Letter of approval for access to facilities in Western Cape

Centre for Infectious Disease Epidemiology & Research
School of Public Health and Family Medicine
Level 5, Falmouth Building
Faculty of Health Sciences
University of Cape Town
Observatory
7925

For attention: Katherine Brittin

Re: A case study of the barriers and enablers of implementation of BFHI in a rural sub-district setting

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following people to assist you with any further enquiries in accessing the following sites:

Cape Winelands	S Neethling	Contact No. 023 348 8119
Worcester Hospital	E Vosloo	Contact No. 021 860 2501

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final report within six months of completion of research. This can be submitted to the provincial Research Coordinator (Health.Research@westerncape.gov.za).
3. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR J EVANS
ACTING DIRECTOR: HEALTH IMPACT ASSESSMENT

DATE:

CC

L PHILLIPS

DIRECTOR: CAPE WINELANDS



Western Cape
Government

PHANT

STRATEGY & HEALTH SUPPORT

100 Main Road, Cape Town 7925
Tel: 021 483 6000 (toll-free) 021 483 6001
Fax: 021 483 6002 (toll-free) 021 483 6003
Email: info@wcape.gov.za
Website: www.wcape.gov.za

REFERENCE: RP 012/2014
ENQUIRIES: Ms Chenele Boderick

Centre for Infectious Disease Epidemiology & Research
School of Public Health and Family Medicine
Level 5, Falmouth Building
Faculty of Health Sciences
University of Cape Town
Observatory
7925

For attention: Katherine Brann

Re: A case study of the barriers and enablers of implementation of MBFI in a rural hospital setting

Thank you for submitting your proposal to undertake the above mentioned study. We are pleased to inform you that the department has granted you approval for your research.
Please consider the following people to assist you with any further enquiries in processing the following ones:

Cape Winelands
Worcester Hospital

S Noothling
E Vosloo

Contact No. 023 348 8119
Contact No. 021 880 2501

Please ensure that the following are adhered to:

1. Arrangements must be made with managers, providing local medical facilities or requesting facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final report within 30 months of completion of research. This can be submitted to the provincial Research Coordinator (Health_Research@wcape.gov.za).
3. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR J EVANS
ACTING DIRECTOR/ HEALTH IMPACT ASSESSMENT

DATE

CC

L PHILLIPS

DIRECTOR: CAPE WINELANDS

Appendix 5: UCT Ethics Approval



UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee



Room E52-24 Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone (021) 406 6336 • Facsimile (021) 406 6411
Email: shred@uct.ac.za
Website: www.health.uct.ac.za/research/humanethics/forms

11 December 2013

HREC REF: 633/2013

Dr K Stinson
CIDER
Public Health & Family Medicine
Falmouth Building
Room 3.35 level 3

Dear Dr Stinson:

PROJECT TITLE: A CASE STUDY OF THE BARRIERS AND ENABLERS OF IMPLEMENTATION OF MBFI IN A RURAL HOSPITAL SETTING

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee for review.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study. We acknowledge that the Master's student Katherine Britten is also involved on this project.

Approval is granted for one year until the 30th December 2014

- Please change the supervisor to be the PI. The student will be recognised on all communications.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period. (Forms can be found on our website: www.health.uct.ac.za/research/humanethics/forms)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the HREC reference in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN ETHICS

Federal Wide Assurance Number: TWA00001637

Institutional Review Board (IRB) number: (IRB0001938)

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

The Human Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines to: Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) and FDA Code Federal Regulation Part 312.56 and 312.61.

Appendix 6: South African National Department of Health Infant and Young Child Feeding Recommendations, 2013

Main Feeding Recommendations				
HIV negative women	Exclusively breastfeed their infants during the first six months of life.	Introduce adequate, safe and appropriate complementary foods at 6 months.	Continue breastfeeding for 2 years or longer.	Breastfeeding cessation needs to occur gradually over one month. Abrupt cessation is discouraged.
HIV positive mothers (and whose infants are HIV uninfected or of unknown status) On lifelong ART			Continue breastfeeding for 12 months (recommended). The infant should receive ARV's from birth until six weeks of age as prescribed in accordance with current PMTCT guidelines.	
HIV positive mothers (and whose infants are HIV uninfected or of unknown status) NOT lifelong ART			Continue breastfeeding for the first 12 months (recommended). The mother and/or infant should receive ARV's as prescribed in accordance with current PMTCT guidelines. This should continue for one week after all breastfeeding has stopped.	
HIV positive mothers and whose infants are HIV infected			Continue breastfeeding for 2 years or longer.	
There is evidence that almost all women can breastfeed however, a small numbers of mothers may not be able to breastfeed temporarily or permanently due to personal or health reasons affecting the child. In these cases the mother should be counselled and educated on an individual basis on the recommendations for safe formula feeding below.				

Appendix 7: Stakeholder Mapping of role players in the Implementation of BFHI in Breede Valley Sub District

Stakeholder Analyses for Implementation of BFHI

Level of health System	Stakeholders (SH)	Position on Policy Implementation (PI) - High (H), Medium (M), Low (L)		Power influences on Policy Implementation (PI) - High (H), Medium (M), Low (L)		Overall Power level score at Policy Implementation
		A. Interest & values of relevance to policy issue	B. Stakeholder support of Policy Implementation	C. Power resources to influence Policy Implementation	D. Degree of limitations on actor power with Policy Implementation	
Macro	National Department of health	H - Priority area to reduce infant mortality rate	H - Minister of Health publically supports BFHI implementation laid out in several strategic planning documents	M - political will evident to support implementation	H - No influence at ground level of policy implementation	5
Macro	NGO's	H - high understanding of strategic benefit of issue	H - good support can translate into advocacy at high level	M - limited power dependent on programme priorities and relationship with DOH	H - limitations set by DOH, dependent on NGO's ability to navigate relationship	5

Meso	High level Management	H - mandated to improve health outcomes district wide and to ensure successful MBFI accreditation	M - conflicting priorities give less opportunity for higher support	H - power and opportunity to advocate and public support policy at various forums	H - are not visible to frontline staff and lack insight into challenges on the ground to PI	5
Meso	Facility Level Management	H - variance of understanding of importance of policy and of the detail of the policy itself	H - when well informed evidence of high support for policy	H - positioned to be able to directly influence front line staff through leadership and management	L - lowest degree of limitation when good buy in for policy	8
Meso	Dietician	H - Nutrition directorate mandated to implement policy - dietician responsible for PI and support	H - MBFI accreditation part of work plan, has direct effect on nutritional status of population served	M - provides leadership role in influencing policy implementation but lacks managerial influence to	H - Nursing staff often find conflict with implementation by the cadre that is not working on the frontline at implementation level	5

Meso/Micro	Nursing/Midwifery Staff	M - variance of understanding of importance of policy and of the detail of the policy itself	M - when well informed there is good support but also a degree of resistance were there is training and information lacking	H - where there is buy in there is evidence of high level implementation as the street level bureaucrats with the most influence on the clients	M - difficult to influence peers, suggestion that the mandate needs to come from higher level staff	5
Meso/Micro	Medical Staff	M - lack of information and relevance to their role results in low interest	L - unless directly engaged in process there is low support for policy	H - medical staff often perceived as the highest level in the Hierarchy and therefore yield a great deal of potential power	M - limitations for medical staff include the focus on acute issues as the fixers and have less time for health promotion	3
Meso/Micro	Lay counsellors/Peer supporters	L - limited understanding of the interest and values of policy	M - good support when well informed and trained	H - limited power in clinical setting but high influence within community	M - limitations limited to clinical setting	4
Micro	Community members	L - limited understanding of the interest and values of policy	M - good support when well informed and supportive	H - limited power in clinical setting but high influence within community	H - limitations limited to clinical setting	3

Appendix 8: Information for Authors, Health Policy and Planning

Health Policy and Planning's aim is to improve the design and implementation of health systems and policies in low- and middle-income countries through providing a forum for publishing high quality research and original ideas, for an audience of policy and public health researchers and practitioners. HPP is published six times a year.

HPP has a double-blinded peer-review policy. All papers, in each of the categories described below, are peer reviewed.

Specific objectives are to:

- Attract high quality research papers, reviews and debates on topics relevant to health systems and policies in low- and middle-income countries;
- Ensure wide geographical coverage of papers including coverage of the poorest countries and those in transition;
- Encourage and support researchers from low- and middle-income countries to publish in *HPP*;
- Ensure papers reflect a broad range of disciplines, methodologies and topics;
- Ensure that papers are clearly explained and accessible to readers from the range of disciplines used to analyse health systems and policies; and
- Provide a fair, supportive and high quality peer review process.

Health Policy and Planning welcomes submissions of the following types: original articles, review papers, methodological musings, and research in practice, commentaries, and papers in our series' How to do (or not to do)...' [for example, see [Hutton & Baltussen, HPP, 20\(4\): 252-9](#)] and '10 best resources' [for example, see [David & Haberlen, HPP, 20\(4\): 260-3](#)].

Authors should pay close attention to the factors that will increase likelihood of acceptance. As well as the high overall quality required for publication in an international journal, authors should address HPP's readership: national and international policy makers, practitioners, academics and general readers with a particular interest in health systems and policy issues and debates in low- and middle-income countries. Manuscripts that fail to set out the international debates to which the paper contributes, and to draw out policy lessons and conclusions, are more likely to be rejected or returned to the authors for redrafting prior to being reviewed. In addition, economists should note that papers accepted for publication in HPP will consider the broad policy implications of an economic analysis rather than focusing primarily on the methodological or theoretical aspects of the study.

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Please read these instructions carefully and follow them closely to ensure that the review and publication of your paper is as efficient and quick as possible. The Editorial Office reserve the right to return manuscripts that are not in accordance with these instructions.

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- original articles
- review papers
- methodological musings
- research in practice
- commentaries
- papers in our series 'How to do (or not to do)...' [for example, see [Hutton & Baltussen, HPP, 20\(4\): 252-9](#)] and
- '10 best resources' [for example, see [David & Habermen, HPP, 20\(4\): 260-3](#)].

ORIGINAL RESEARCH

Manuscripts should preferably be a maximum of 6000 words, excluding tables, figures/diagrams and references.

The **title page** should contain:

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- Each author's affiliation and qualifications;
- Keywords and an abbreviated running title;
- 2-4 Key Messages, detailing concisely the main points made in the paper;
- Acknowledgements
- A word count of the full article.

The manuscript will generally follow through sections: Abstract (no more than 300 words), Introduction, Methods, Results, Discussion, Conclusion, References. However, it may be appropriate to combine the results and discussion sections in some papers. Tables and Figures

should not be placed within the text, rather provided in separate file/s.

In the **acknowledgements**, all sources of funding for research must be explicitly stated, including grant numbers if appropriate. Other financial and material support, specifying the nature of the support, should be acknowledged as well.

Figures should be designed using a well-known software package for standard personal computers. If a figure has been published earlier, acknowledge the original source and submit written permission from the copyright holder to reproduce the material. Colour figures are permitted but authors will be required to pay the cost of reproduction.

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Statistics:

For the reporting of statistical analyses please consider the following additional points:

- Focus the statistical analysis at the research question.
- Report simple analyses first, then only more sophisticated results.
- Provide information about participation and missing data.
- As much as possible, describe results using meaningful phrases (E.g., do not say "beta" or "regression coefficient", but "mean change in Y per unit of X"). Provide 95% confidence intervals for estimates.
- Report the proportions as N (%), not just %.
- Report p values with 2 digits after the decimal, 3 if <0.01 or near 0.05. E.g., 0.54, 0.03, 0.007, <0.001, 0.048. Do not report p values greater than 0.05 as "NS".
- Always include a leading zero before the decimal point (e.g., 0.32 not .32).
- Do not report tests statistics (such as chi-2, T, F, etc.)."

REVIEW ARTICLES:

Manuscripts should preferably be a maximum of 10,000 words, excluding tables, figures/diagrams and references.

Reviews may be invited. They generally address recent advances in health policy, health systems and implementation. Systematic reviews are particularly welcomed, but may not be appropriate for every topic. If authors are submitting a review article that is not a systematic review then the paper should explain why a systematic review was not feasible/desirable, and the review methods should be described in a way that is as clear and as replicable as possible.

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- Acknowledgements
- A word count of the full article.

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- The sections must be arranged as follows: i) Title page, ii) Abstract, iii) Introduction, iv) Body of the paper, and v) References. Main sections should be coordinated by the author, and inserted between Introduction and Reference sessions. Please contact our office before submitting a manuscript in this category.

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- Acknowledgements
- A word count of the full article.

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All **measures** should be reported in SI units, followed (where necessary) by the traditional units in parentheses. There are two exceptions: blood pressure should be expressed in mmHg and haemoglobin in g/dl. For general guidance on the International System of Units, and some useful conversion factors, see 'The SI for the Health Professions' (WHO 1977).

References:

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Baker and Watts (1993) found...

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Where works by more than two authors are cited, only the first author is named followed by 'et al.' and the year. The reference list must be typed double-spaced in alphabetical order and include the full title of both paper (or chapter) and journal (or book), thus:

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Volume number in bold: page numbers.

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